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POST HARVEST CROP PROCESSING

ADVICE ON STORAGE OF SEED POTATOES IN BELORUSSIA

Minsk SEL'SKAYA ZHIZN' in Russian 6 Nov 80 p 3

[Article by N. Goncharov and I. Adamov, candidates of agricultural sciences and senior scientific workers at the Belorussian Scientific Research Institute of Potato, Fruit and Vegetable Production: "Storage Regime for Seed Potatoes"]

[Text] The meteorological conditions experienced during this year's growing season exerted an extremely adverse effect on the potato harvest. As a result, it was considerably lower than the harvest expected. By the time of the harvest, the tubers had still not accumulated their usual content of dry substances, they still had not ripened physiologically and their skins had not yet hardened. Moreover, they were damaged to a greater degree during the mechanical harvesting and sorting operations. A sharp decrease was observed in the viability and resistance to diseases of potatoes harvested from excessively damp areas. The situation was further aggravated by the fact that many undecomposed maternal tubers remained at the time of the harvest operations and thus they became partially mixed with the new crop. At the present time, these tubers are decaying and creating the danger of other tubers becoming spoiled.

The above facts are arousing serious concern with regard to preservation of the seed stock. Efficient measures must be undertaken at the present time in order to avoid further potato spoilage. First of all, an inspection must be carried out on the condition of the tubers in each clamp and bin of a potato storehouse. If centers of decayed potatoes are uncovered, they must be removed immediately to the point where only healthy material remains and thereafter the soil-straw covering must be restored at once.

If small centers of rot are scattered throughout an entire heap of tubers, the entire clamp or bin must be sorted out completely. This work must be started without delay and conducted throughout the daylight period. In the event of inclement weather, use should be made of temporary portable coverings made out of film attached to wooden frames.

If there is no threat of frost, the sorted potatoes are covered at night by a film and topped off with a light layer of straw. If a considerable frost is expected, the potatoes are covered with layers of dry straw and thereafter by a 10-15 centimeter thick layer of dirt. Special attention is being attached this year to the use of forced ventilation. Thus the seed stock should ideally be stored on permanent clamp platforms. If a sufficient number of these platforms is not available, then four-sided wooden chutes having drilled openings should be installed at the base of the clamps during the sorting operations. On frost-free days, fans are employed for passing fresh air through these chutes. Any type of fan, including tractor sprayers, can be used for this purpose. It is also helpful to install three-sided wooden chutes at the top of the tuber heaps. These chutes serve as exhaust ducts for drawing off the steam-saturated hot air. The exterior ends of the ventilation devices must terminate in the straw covering. With the onset of very cold weather, these ends should be filled with straw and covered with a layer of dirt.

The condition of tubers is determined based upon the temperature in the middle of a heap of potatoes. Thus, when establishing clamps, control pipes made out of four tightly adjusted plates should be installed. The internal cross section of the pipes is 3 X 3 or 4 X 4 centimeters. The upper opening of the pipes must be constantly closed by means of a tightly twisted braid of straw or a rag. It is opened only for the purpose of inserting or withdrawing a thermometer.

The temperature must be taken no less often than once a week. The thermometer readings are recorded in a special notebook, in order to make it possible to analyze the processes taking place in a heap of tubers. The optimum temperature for late autumn and winter storage of potatoes is +2-3 degrees (permissible increases to 5 and a maximum of 6 degrees). When this temperature is exceeded, measures are employed for lowering it by means of increased ventilation.

Many years of practical experience have established the fact that the best storage conditions in conventional clamps are created when the following clamp parameters exist: width at the base of 200-210 centimeters, height of 100 centimeters and length of 20-25 meters. Special importance is attached to the quality of the straw used for covering the potatoes: the dryer it is, the better the absorption of the water vapors released.

At the present time, it is difficult to make a judgement concerning the nature of the forthcoming winter. Thus a heat-insulating straw-dirt covering should be made with a certain insurance reserve. For example, the layer of straw must be no less than 70-75 centimeters. Subsequently it will be compressed and reduced roughly twofold in thickness. The layer of the final dirt covering at the base of a clamp is 40-45 centimeters and it gradually decreases to 20-22 centimeters.

The potato structure has been disrupted this year. There are roughly one and a half to two times more small tubers than in previous years. Many years of study have shown that tubers weighing 20-40 grams serve as very fine planting stock. Thus, when sorting out the potatoes, such tubers should be retained and used for planting. However, in such instances the planting density should be increased to 70,000-75,000 per hectare. In the process, the expenditure of seed decreases to 8-10 quintals per hectare and the yield may be the same as that obtained from the planting of average size tubers.

During the 1976-1977 season, the potato storage conditions were very complicated throughout the republic. At that time, the kolkhoz and sovkhoz specialists acquired a great amount of experience in the preservation of seed stock. The application of the measures enumerated above and also accumulated experience will make it possible to overcome the consequences of this year's severe weather conditions and preserve the seed of the "secondary grain" crop.

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AGRO-ECONOMICS AND ORGANIZATION

GOSPLAN FIRST DEPUTY CHIEF ON DEVELOPMENT OF AGROINDUSTRIAL COMPLEX

Moscow POLITICHESKOYE SAMOOBRAZOVANIYE in Russian No 10, 1980 pp 32-40

[Article by P. Paskar', first deputy chairman of USSR Gosplan: "The Development of the Agroindustrial Complex in the USSR"]

[Text] The Communist Party and the entire Soviet population are performing a great deal of work to promote the further development of agriculture. Creatively developing Lenin's agrarian policy, the party is consistently and purposefully striving to transform agriculture into a highly developed sector of the socialist economy. This activity became particularly widespread after the March (1965) CPSU Central Committee Plenum, which laid the bases of the party's present agrarian policy and set the objective of the accelerated growth of agricultural production. Many agrarian problems have been solved since that time. Our agriculture is confidently approaching the stage of intensification.

One of the distinctive features of agricultural production today is its broader and deeper ties with other branches of the national economy, primarily industry. This interrelationship is reflected in the increasing quantities of technical equipment, mineral fertilizer, combination fodder and other material resources delivered to kolkhozes and sovkhozes each year by industry. The number of industrial branches supplying agriculture with their products is increasing. In turn, industry's supply of raw materials and the population's supply of food depend to a tremendous extent on the level of agricultural development. Under these conditions, it is particularly important to arrange for economically sound production relations between the agrarian sector and other branches of the national economy. In other words, it is important to arrange for the efficient functioning and development of the nation's agroindustrial complex. "Apparently, the time has come for the improvement--and serious improvement--of agriculture's production and economic cooperation with directly related branches of industry to ensure a unified, statewide approach to the development of the entire agroindustrial complex," said Comrade L. I. Brezhnev ("Materialy XXV s"yezda KPSS" [Materials of the 25th CPSU Congress], Moscow, Politizdat, 1976, p 53).

The agroindustrial complex (APK) is a complex production and economic system. It represents a group of branches of the national economy, specializing in the production of farming and animal husbandry products, their processing and their preparation for consumption, as well as the production of the means of production for agriculture and related branches. The agroindustrial complex in our nation is in the formative stage; its composition and structure have not been precisely delineated as yet. When the complex' branches and subbranches are being defined, consideration is given to present and projected intersectorial ties involving shipments of products and the performance of services, as well as the specific technological, economic and social demands made on producer branches by consumer branches. The complex can be divided into three main spheres in terms of the functions of its branch links.

The first sphere consists of branches and subbranches of industry which serve agriculture, light industry, the food industry, the meat and dairy industry and the system for the procurement of means of production. It takes in tractor and agricultural machine building, machine building for animal husbandry, fodder production, light industry and the food industry, the production of specialized motor transport vehicles and meliorative equipment, the production of mineral fertilizers and chemical means of plant protection, the combination fodder and microbiological industries, technical maintenance and the material and technical supply of agriculture.

The second sphere is that of agricultural production proper. It takes in branches of farming and animal husbandry, agrochemical services and veterinary services for agriculture.

The third sphere consists of all the branches and production units engaged in the procurement, shipment, storage and processing of agricultural raw materials. Most of the final product of the APK, ultimately used to satisfy public demand, is created in this sphere. It takes in the food industry, meat and dairy industry, flour and groat industry, enterprises of light industry engaged in the primary processing of agricultural raw materials, the procurement system and the storage and warehousing network.

As we can see, the agroindustrial complex encompasses a huge economic sphere. It accounts for a high percentage of the national economy's total production output, as well as of the nation's productive capital and employed labor force. The output of APK branches constitutes approximately 40 percent of the gross product of the national economy. Around 40 percent of all the workers in our nation are employed in the APK.

Huge capital investments are being allocated for the development of branches of the agroindustrial complex. During the years of the current five-year plan, for example, they totaled around 210 billion rubles, or almost 50 billion more than during the years of the Ninth Five-Year Plan. This sum constitutes almost one-third of all the capital investments used during this period for the development of the national economy as a whole. These sizeable capital investments made it possible to considerably augment fixed productive capital in branches of the APK.

The effective development of the first of the main APK spheres listed above establishes the necessary conditions for the integration of farming and industry and for the more active agricultural use of the achievements of the present technological revolution. The planned transfer of agricultural production to an industrial base is being accelerated in this way. The most perceptible results in the technical equipping of agriculture were witnessed after the March (1965) CPSU Central Committee Plenum, at which time the reinforcement of the material and technical base of agriculture, the provision of agriculture with the latest technical equipment and the efficient use of this equipment were defined as the focal point of the party's agrarian policy during the current stage.

The production of machines and equipment and their delivery to kolkhozes and sovkhozes have been considerably augmented. Whereas kolkhozes and sovkhozes received 239,500 tractors in 1965, the figure was 355,000 in 1979, or almost 1.5 times as many (more than 2.2 times as many in terms of their total engine power), and the respective figures for trucks (including special-purpose vehicles and vans) were 94,000 and 266,500 (or 2.8 times as many), the figures for grain combines were 79,000 and 112,000, and so forth. During this same period, a specialized branch for the production of equipment for animal husbandry and fodder production came into being, accelerating the transfer of this branch of agriculture to an industrial basis.

Kolkhozes and state agricultural enterprises and organizations spent 71 billion rubles on technical and other equipment between 1966 and 1978, while the figure for the preceding 13 years was only 25 billion rubles. The motor vehicle and tractor pool of kolkhozes and sovkhozes has been almost completely renovated and its qualitative composition has improved. As a result, our agriculture has taken a large step forward in its technical equipping. In terms of the capital-labor ratio and power-labor ratio, however, this branch does not meet today's requirements as yet and is lagging far behind industry. Many areas of kolkhoz and sovkhoz production are inadequately mechanized. Systems of machinery are not being used enough in agriculture, and this is slowing down its industrialization. At present, of the almost 3,000 different types of technical devices making up systems of machinery for the performance of agricultural operations, only around 1,800 are being mass-produced.

The July (1978) CPSU Central Committee Plenum specified a number of large-scale undertakings for the 11th Five-Year Plan, aimed at raising the level of mechanization in farming and animal husbandry. Plans call for the considerable augmentation of kolkhoz and sovkhoz supplies of modern high-power tractors with all of the necessary mounted or towed machines and implements, special-purpose trucks, highly productive combines for the performance of agricultural operations in accordance with the highest requirements of agricultural science, various types of equipment for animal husbandry and fodder production and other agricultural equipment. Machine builders have been requested to make a maximum effort to successfully attain objectives set by the party with a view to the accelerated mechanization of agricultural production.

Industry is providing kolkhozes and sovkhozes with the means of production they require on an increasingly broad scale. These include mineral fertilizers and chemical means of plant protection, which are helping kolkhoz and sovkhoz workers to increase the yield of agricultural crops. Shipments of fertilizer for agriculture, for example, increased from 6.3 million tons in 1965 to 17.4 million tons in 1979 (calculated according to 100-percent nutrients), and shipments of chemical food supplements increased from 30,000 tons to 491,000 tons. This year agriculture received around 600,000 tons of chemical means of plant protection, which reduced product losses resulting from pests and crop diseases. The combination fodder industry and the microbiological industry, which supplies agriculture with edible protein, vitamins, amino acids, enzymes and other products of microbiological synthesis, are undergoing intensive development.

Therefore, the number of industrial branches producing means of production for agriculture is rising, and the scales of their deliveries to kolkhozes and sovkhozes are growing by leaps and bounds. As a result, division of labor has become more pronounced, and agriculture is losing many of its production functions. It is giving birth to independent branches. For example, water management construction and land reclamation have broken away from agriculture, and the same is true, to a considerable extent, of material and technical supply, repair services, production construction, combination fodder production, and so forth.

This has given agriculture an opportunity to concentrate more and more on the particular fields of activity that are directly connected with the productive use of nature's biological potential. But this has not been a smooth process; it has been held up by a number of factors. In some cases, for example, kolkhozes and sovkhozes are still performing many non-farming operations, including the production of combination fodder and building materials, the construction of various farming facilities, and so forth. The value of the non-farming product at kolkhozes and sovkhozes in 1978, for example, was 21.5 billion rubles. This testifies that a significant part of the production resources allocated for agricultural development must be used in other fields of activity.

The industrialization of agriculture is causing its material and technical base to gradually approach industry in terms of the main quality indicators. It is on this basis that agriculture is progressing from the mechanization of basic technological processes to the comprehensive mechanization of production. In line with the higher technical equipment level of agriculture, the July (1978) CPSU Central Committee Plenum stipulated that the comprehensive mechanization of the cultivation of all major agricultural crops should be completed during the 11th Five-Year Plan. Industrial technology, based on the extensive use of modern scientific achievements, comprehensive mechanization and intensive division of labor, is being used more and more. All of this is appreciably reducing agriculture's dependence on natural and climatic conditions and is allowing for the fuller use of the biological potential of soil, plants and animals and the constant elevation of labor productivity and agricultural production efficiency indicators.

The central link of the agroindustrial complex is, of course, agriculture proper. In the foreseeable future, farming and animal husbandry will remain the chief primary source of the means of human existence. Most of agriculture's products cannot be produced in other branches or replaced by other products.

As a result of our party's consistent implementation of its agrarian policy, our agriculture is definitely progressing in the area of intensification. In the last 3 five-year plans, a total of around 400 billion rubles has been allocated for its development. Intensification has become the chief factor contributing to increased scales of kolkhoz and sovkhoz production. The augmentation of expenditures on agricultural development and the reinforcement of agriculture's material and technical base have been accompanied by the growth of its output [see table on following page].

Even in 1979, with its extremely unfavorable weather conditions, the grain yield was 179 million tons. Our nation's largest harvest of raw cotton was picked the same year. It totaled 9.2 million tons. The output of meat (dressed weight) in 1979 was 15.5 million tons.

Output of Main Agricultural Products

(on farms of all types; annual average; in millions of tons)

	1961-1965	1966-1970	1971-1975	1976-1979
Grain..............................	130.3	167.6	181.6	209.0
Raw cotton.........................	5.0	6.1	7.7	8.7
Sugar beets........................	59.2	81.1	76.0	90.7
Potatoes...........................	81.6	94.8	89.8	86.5
Vegetables.........................	16.9	19.5	23.0	26.1
Meat (dressed weight)..............	9.3	11.6	14.0	14.8
Milk...............................	64.7	80.6	67.4	93.2
Eggs, billions.....................	28.7	35.8	51.4	61.9
Wool, thousands of tons............	362	398	442	458

The development of agricultural production is improving the Soviet people's diet. The quality of products is also improving. The average per capita calorie count of the Soviet diet is 3,200 calories a day, which is on a level with the world's most highly developed nations.

Average per capita meat and meat product consumption rose from 41 kilograms in 1965 to 58 kilograms in 1979, milk and dairy product consumption rose from 251 kilograms to 319 kilograms, and egg consumption rose from 124 eggs to 233 per capita. The production level of some products, however, is still too low. As we know, there have been difficulties in supplying the population with meat, dairy products, vegetables and fruit.

The party's line of dramatic agricultural growth was emphatically reaffirmed in the decisions of the July (1978) CPSU Central Committee; Plenum. It adopted a program for the continued growth of agricultural production. The average annual grain yield in 1981-1985 is to range from 238 to 243 million tons, and by 1990 it should produce an average of 1 ton per capita. Meat production should total 19.5 million tons by the end of the next five-year plan. The output of other agricultural products is to be augmented substantially. The plenum announced that the party would continue the consistent implementation of its line of constantly increasing capital investments in this branch so that the proportion accounted for by these investments in total funds allocated for national economic development in the 11th Five-Year Plan will be at least as high as in the 10th. This party directive will be taken into account when the new five-year plan for the economic and social development of the nation is being drafted.

The formation of the agroindustrial complex brings about significant changes in the structure and nature of agricultural production. Above all, the movement of material from agriculture to industry increases. In 1977, for example, state purchases of farming and animal husbandry products were 172 percent above 1965 purchases. Secondly, the absolute and relative amounts of agricultural products shipped directly to the consumer are decreasing. According to intersectorial balance data, the increase in total agricultural output between 1959 and 1972 measured almost 37 percent, but the increase in the quantity turned over for industrial processing exceeded 81 percent. During this time, the proportion accounted for by products used as raw material in industry rose from 39.6 percent in 1959 to 52.4 percent in 1972. Consequently, agriculture is gradually becoming primarily a raw material branch, and the economic results of operations in this sphere will be increasingly determined by the conditions of intersectorial exchange.

The reinforcement of the material and technical base of agriculture and its gradual transfer to an industrial basis have accelerated the processes of production concentration and specialization and the formation of interfarm and agroindustrial enterprises and associations. Favorable conditions for the integration of farming and industry have been established in the production of several agricultural products. This is most clearly observed in agroindustrial associations.

These associations represent the highest form of the integration of agricultural and industrial production. They constitute unified production-farming complexes in which efficient specialization and the cooperation of agricultural enterprises with enterprises of the processing industry serve as a basis for the organic combination of the production of agricultural raw material with its industrial processing, and, in some cases, with the sale of the finished product as well. Many agroindustrial associations have already been founded and are functioning in the production and processing of vegetables, fruit, grapes and the products of poultry-breeding and in other areas of farming and animal husbandry. The associations are made up of kolkhozes, sovkhozes, joint agricultural enterprises (interfarm organizations) and processing, warehousing, trade, transport and other state and cooperative enterprises and organizations, basing their activity on economic accountability within the framework of a single plan and administrative organization.

The creation of associations makes it possible to considerably augment the output, reduce the losses and improve the quality of produce and other perishables. For example, an agrarian-industrial-trade association was formed in the Georgian SSR in 1975 by the republic Ministry of Agriculture. It operates on the principle of "from the field to the store." In 1978 it produced 4 times as many potatoes and 1.5 times as many vegetables as in 1974, and its overall commodity turnover was twice as great. Last year it produced, and its trade network sold, 142,000 tons of vegetables and 59,000 tons of potatoes--1.9 times as much of this produce as in 1974. The association now accounts for 58 percent of state vegetable purchases and 45 percent of state potato purchases in the Georgian public sector.

Territorial agroindustrial associations are being created in some parts of the nation to combine the efforts and coordinate the activities of agricultural, procurement, processing, supply and service enterprises and organizations. We could list, in particular, the Vil'yandiskiy and Pyarunskiy rayon agricultural associations in the Estonian SSR, the Talsinskiy and Valmiyerskiy rayon associations in the Latvian SSR and the Abashskiy Rayon Association in the Georgian SSR.

The operational results of these associations testify to their high level of efficiency. Within 4 years, for example, the gross agricultural product of the Abashskiy Association increased 59 percent, including a 68.5-percent increase in corn, a 3.6-fold increase in vegetables and an increase exceeding 40 percent in milk and meat production. Sales of grain to the state rose 2.3-fold, meat sales rose 38 percent and milk sales rose 34 percent. There was a 42-percent rise in labor productivity.

As the number of agroindustrial enterprises and associations increases, conditions are established for their organizational, economic and technological merger within the bounds of larger structures--on the level of regions and subbranches of agriculture and industry. These subbranches do not produce some kind of intermediate product or raw material, but a product ready for consumption. It passes through all stages of production within a single production association or combined sectorial association.

Viniculture and viticulture, poultry-breeding, essential-oil production and some other branches, for example, have become independent agroindustrial sectors in a number of union republics. The creation of sectorial agroindustrial associations of this type is promoting the establishment of the national agroindustrial complex.

Let us consider, for example, industrial poultry-breeding. How does it differ from other branches of agriculture? Above all, by its high degree of division of labor. The production of the commercial product here is the responsibility of many narrowly specialized enterprises, which interact on the basis of broad production ties. Furthermore, agricultural production here is dependent to the maximum on several related branches. This is reflected in the fact that most of the labor used in the production of the poultry-breeding output consists of expenditures of the past, embodied labor of workers in the combination fodder industry, machine building and other industries. The proportion accounted for by industry's material expenditures in total material expenditures in USSR Ptitseprom's poultry-breeding system, for example, is approaching 100 percent, as compared to 61 percent in agriculture as a whole.

Whereas the autonomy of production units is still characteristic of agriculture as a whole, it is virtually impossible within the agroindustrial poultry-breeding enterprises. This distinctive feature of industrial poultry-breeding is also characteristic of other enterprises of the industrial type--large animal husbandry complexes, hothouse combines and so forth. Here we find the organic combination of agricultural and industrial production, representing a coming stage in the development of the agroindustrial complex.

As we have already pointed out, it is not enough to simply harvest kolkhoz and sovkhoz crops. The products that have been grown have to be stored, processed and delivered to consumers in good, high-quality condition. Here, much depends on the precisely organized and efficient operations of procurement, trade and transport organizations and processing enterprises. The combination of all these makes up the third of the spheres we distinguished in the national agroindustrial complex.

The production of foodstuffs is acquiring particular significance now. Most of the population's groceries undergo industrial processing. For example, around three-fourths of all meat and milk, two-thirds of all eggs and virtually all grains are processed. This is why the development of the food industry is the deciding factor in this sphere of the agroindustrial complex.

Recent years have witnessed the appreciable growth of the production capacities of the processing industry and the material base of procurement and trade organizations. Capital investments of around 10 billion rubles were allocated in the 10th Five-Year Plan for the creation of new capacities, the remodeling of existing enterprises and the development of the material and technical base of the food seasoning, meat and dairy industries. This was almost 2 billion rubles more than in the Ninth Five-Year Plan. New large grain elevators, sugar refineries, dairy plants, meat combines and other enterprises were commissioned.

It must be said, however, that the discrepancy between agricultural raw material output and the capacities for its processing is being reduced too slowly. This is resulting in substantial losses of agricultural products. The minimization of losses of foodstuffs and agricultural raw materials in all stages from production to consumption constitutes a difficult and multifaceted problem.

It was stressed at the November (1979) CPSU Central Committee Plenum that, when it comes to ensuring the uninterrupted and harmonious operation of all links of the chain connecting the field and farm with the consumer, "everything is of equal importance--shipping, the production of packing materials, the storage and processing products and, finally, trade." These spheres of the APK guarantee the efficient use and conservation of agricultural raw materials--that is, they ensure a larger final output per ton of grain, meat, milk, fruit and vegetables produced.

It is essential that the system for the storage of agricultural products be improved. Experience has shown that it is easier and more convenient to store most of these products directly on the kolkhozes and sovkhozes for some time. This enhances quality, reduces losses, reduces the workload of centralized storage facilities and allows for the more uniform utilization of transportation and manpower. Consequently, more kolkhoz and sovkhoz warehouses and storage facilities must be built. This is an important way of reducing losses of agricultural products.

Experience has shown that the quality of agricultural products is often diminished by the time they reach the consumer. This is primarily due to shortage of packing materials, the untimely shipment and processing of products or poorly organized trade. For example, sugar beet production and procurements have increased significantly in recent years, but the output of sugar from these beets has actually decreased. This is due to the lower sugar content of the tubers and to the more sizeable losses occurring during storage and shipment and as a result of lengthier periods of processing.

This year kolkhoz and sovkhoz collectives put a great deal of effort and skill into the cultivation of a good harvest. Rural workers have joined the competition for a fitting tribute to the 26th CPSU Congress, have overcome the difficulties arising from unpredictable weather conditions and are making every effort to complete harvesting work. Workers in other branches of the agroindustrial complex now have an equally important responsibility: They must preserve what the farmers have grown and gathered. Procurement workers and the collectives of enterprises in the food industry, the processing industry, trade and transportation must take all necessary steps to ensure that each kilogram of grain, vegetables, fruit and other products is preserved and reaches the consumer. "In agriculture, more than in any other branch, the year-end results depend on how the work is organized in the final stage," Comrade L. I. Brezhnev said in his speech at the festive meeting in Alma-Ata on 29 August 1980.

The reduction of losses of agricultural products, the enhancement of their quality and their timely delivery to consumers are all being promoted by agroindustrial associations, in which the production, procurement, industrial processing and sale of products are concentrated in a single complex. Creative cooperation by agricultural workers with the enterprises which process their products provides maximum assistance in the preservation of these products. An example of this can be seen in the initiative of beet-growers and the sugar refinery collective of Yampol'skiy Rayon in Vinnitskaya Oblast. They arranged for efficient collective work. This appreciably reduced losses of sugar in the beets and increased the sugar output.

The development of direct kolkhoz and sovkhoz ties with processing industry enterprises and procurement and trade organizations is acquiring increasing significance. In Leningrad Oblast, for example, more than 300 stores in the oblast center receive vegetables directly from sovkhozes, which has regularized deliveries to the trade network and reduced losses and transport costs. The acquisition of products directly from farms by the consumer cooperative network has recently been practiced more widely. These ties, however, have not been developed enough as yet.

Our party has issued numerous directives calling for the efficient operation of the entire mechanism connecting agriculture with the consumer and for precise interaction throughout the entire agroindustrial complex. This is a major prerequisite for the enhancement of product quality, the reduction of overhead costs and the augmentation of the agricultural output.

One of the chief problems in the development of the agroindustrial complex is the need to continue improving its structure as a unified planning and administrative body. It is obvious, however, that current methods of sectorial planning often result in gaps and disparities in the areas where branches of the agroindustrial complex overlap. The existing system of sectorial planning does not always provide for a community of interests in ultimate results.

It is now being suggested more and more that the agroindustrial complex be viewed as an independent object of planning for the purpose of the more balanced and proportional development of all APK branches on all levels. This means that a unified plan for the development of the agroindustrial complex will have to be drafted along with sectorial and territorial plan sections.

The chief purpose of this plan would be the close coordination of the economic activities of all APK links, leading to the more efficient use of material and labor resources in the attainment of the final goal of the complex--the acquisition of the maximum quantity of food products, clothing, footwear and raw materials of high quality with minimum expenditures. This means that the system of indicators in the plan for the development of the APK and its separate spheres and subdivisions will have to reflect the attainment of the final goals of the complex and its efficient functioning as a whole.

The search for new forms and methods of APK planning and management within the entire national economic system will be continued, as will the search for ways of guaranteeing the efficient use of the tremendous potential created for the successful resolution of the food problem. Grand and exceedingly important objectives in this field were set by Comrade L. I. Brezhnev at the November (1979) CPSU Central Committee Plenum and in his speech at the festive meeting in Alma-Ata commemorating the 60th anniversary of the Kazakh SSR and the Communist Party of Kazakhstan. Particular attention was given to the development of various branches of the agroindustrial complex and, above all, the efficient organization of the storage and processing of products and the elimination of product losses. It was announced at the November Plenum that "agricultural production cannot be examined in isolation from the system for the procurement, shipment, storage, processing and sale of food products. All of these make up a single food complex. It should also be planned as a single entity.... And it must also be managed as a single entity, to ensure the uninterrupted and quick movement of products from the production sphere to the counter."

Our current objective is to determine specific methods and forms for the implementation of these party directives and to put all existing reserves of agricultural growth to work within the 11th Five-Year Plan so as to heighten the operational efficiency of each APK branch and ensure the continuous growth of edible and inedible resources in the nation.

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STEPS TO BRING UP LAGGING KOLKHOZES IN RSFSR DESCRIBED

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 11, Nov 80 pp 18-19

[Article by V. Yakushev, chief of the Main Administration of Organizational and Kolkhoz Affairs of the RSFSR Ministry of Agriculture: "Improve the Economy of Lagging Kolkhozes"]

[Text] The public wealth of the kolkhozes grows and multiplies with each year. Their productive capital and energy capacities have increased. By improving the use of land, equipment, and material, financial, and labor resources and introducing the achievements of science and progressive practice they are aiming their efforts at raising the yield of crops and productivity of livestock, at fulfilling plans and socialist obligations for sale of crop and livestock output to the state.

Each zone of the Russian Federation today has many kolkhozes that get 25-30 and more quintals of grain, 250-300 quintals of sugar beets, 20-25 quintals of sunflower seeds, and 200-250 quintals of potatoes per hectare, raise high yields of feed and other crops, and achieve good indicators for the productivity of livestock and poultry and herd reproduction. At such farms the profitability of production and return on capital investment are rising.

At the same time we also have lagging kolkhozes where yields are still low, public animal husbandry is poorly developed, and gross income does not cover the wages fund. This applies especially to Tambovskaya, Lipetskaya, Kaluzhskaya, Vologodskaya, Ryazanskaya, Kalininskaya, Pskovskaya, Permskaya, Novosibirskaya, and Irkutskaya oblasts and the Udmurtskaya, Tatarskaya, and Dagestanskaya ASSR's.

The economic improvement of many kolkhozes, for example in the northern and forested regions, is being held back by the shallow outline of the soils their low natural fertility, and the remoteness of the farms from rayon centers and supply and marketing facilities. The lack of paved roads forces these farms to incur extra expenditures to ship out products and bring in essential commodity-material assets. Some farms are prevented from achieving highly efficient production by complex natural-economic conditions; they need more assistance from agricultural agencies and the enterprises and organizations that serve agriculture. But there are relatively few such kolkhozes in the republic. Here is where attention should be focused. Analysis shows that the lagging kolkhozes have 19 percent less fixed capital than others and that the energy available per kolkhoz member is also lower than at other kolkhozes. Therefore, we must give greater attention to building up the material-technical base of the weak kolkhozes.

But the main causes of the long-standing lag at most kolkhozes are linked to shortcomings in production organization, above all to unsatisfactory work with the land and failure to perform the full set of scientific farming practices to improve farming sophistication in the broad sense of the word.

It cannot be said, of course, that local agricultural agencies in the republic are not working with lagging kolkhozes. Some work to improve their economic positions is being done in every oblast, kray, and autonomous republic. It has improved recently in the Chuvashskaya ASSR, for example. They have worked out appropriate measures for every farm there. Kolkhoz councils and the agricultural agencies of the republic have stepped up their checks on performance of these measures. The production-financial plans and annual reports of lagging kolkhozes are reviewed at the ASSR Ministry of Agriculture. The results of production-financial activities for the quarter, half-year, and year are reported to the balance commissions of the agricultural administrations of rayon executive committees. Sponsorship of lagging kolkhozes by leading farms and industrial enterprises has been organized. The managers of economically weak kolkhozes are periodically assigned to on-the-job training at strong kolkhozes. In general lagging kolkhozes are put in a preferential position in relation to equipment supply, receiving seed of new, highly productive varieties and pedigreed young animals, and receiving financial assistance and credit from USSR Gosbank.

We must admit that many kolkhozes are overcoming their backwardness, reaching the ranks of average and even leading farms. For just one example, take the Kolkhoz imeni Kalinin in Ibresinskiy Rayon. Not long ago they were harvesting nine quintals of grain per hectare there. The yield in 1976-1978 was 25-32 quintals per hectare. Even in 1979, a bad weather year, the farm got 20.7 quintals. This is all a result of improved work with the land. In 1979 each hectare of arable land received eight tons of organic fertilizer. The application of mineral fertilizer to the rows during the planting of grain and potato crops increased. Ammonia water began to be used widely, seed growing was straightened out, and new, high-yielding varieties began to be planted. Much was done to strengthen the feed base.

The Kolkhoz imeni Kosmonavta A. G. Nikolayev in Marposadskiy Rayon, Trudovik and Novaya Sila kolkhozes in Ibresinskiy Rayon, the Kolkhoz imeni Kominterna in Krasnochetayskiy Rayon, and Mir Kolkhoz in Shumerlinskiy Rayon are all formerly lagging farms that are now leading kolkhozes. The number of farms that have bolstered their economic position is increasing in the Chuvashskaya, ASSR. Significant work in this direction is also being done in Chelyabinskaya, Sverdlovskaya, and Voronezhskaya oblasts.

But this is not the case in all places. Many steps envisioned by plans for organizational-management consolidation of weak kolkhozes are not carried out. For example, not all lagging farms observe the demand of directive agencies that priority be given to fulfillment of planned work on chemicalization and improvement of the land and construction of production structures, residential buildings, and cultural-domestic facilities and that procedures be set up to receive output right at the farms and haul it out in transportation belonging to procurement organizations. The Krasnyy Luch Kolkhoz in Lyskovskiy Rayon of Gor'skiy Oblast, for example, is far from the rayon center and does not have a paved access road. In 1979 they did not build a single residential building. Little housing construction is underway at lagging kolkhozes in Tul'skaya, Pskovskaya, Novgorodskaya, Orlovskaya, Ryazanskaya, and other oblasts. For the republic as a whole the amount of living space in the public sector at economically weak kolkhozes increased by just 28 square meters per farm. But the shortage of well-appointed housing, paved roads, cultural-domestic facilities, standard repair shops, garages and barns for storing machinery, and the low level of mechanization of jobs, especially in animal husbandry, create definite production hardships.

It is hardly necessary to prove that correct recruitment of experienced managers and specialists is important at lagging kolkhozes. But what actually happens in Gor'kovskaya Oblast, for example? There are 48 kolkhozes in Gorodetskiy, Bogorodskiy, Bol'shemurashkinskiy, Semenovskiy, and Chkalovskiy rayons and most of them are profitable. In the last three years only four chairmen of kolkhoz boards have been replaced. Sechenovskiy, Tonshayevskiy, Sharanskiy, and Buturlinskiy rayons have 49 kolkhozes, many of which are not making a profit. During the same period 29 of them have changed chairmen, which is more than half of the farms.

In the last five years the economically weak Za Mir Kolkhoz in Ryazanskiy Rayon of Ryazanskaya Oblast has had three different chairmen of the board. Transience is high there among the chief specialists and ordinary specialists. Moreoever, little is being done to keep them.

Quite often a specialist who is newly elected to be chairman of the kolkhoz board, after encountering certain difficulties and not receiving proper support, will throw up his hands, as they say. We must work harder and more energetically to see that economically weak kolkhozes keep not just their managers and specialists but also regular workers, the machine operators and animal husbandry workers. We must establish the conditions necessary to keep employees at the farms and see that newly elected managers master progressive forms and methods of administering public production quickly.

At the same time managers and specialists must be indoctrinated in the spirit of strict compliance with the requirements of the Kolkhoz Charter, especially with regard to efficient use of the land and material, financial, and labor resources and fulfilling obligations to the state.

It is equally important for economically weak kolkhozes to observe democratic principles of production management, decide basic issues of farm life and work collectively, satisfy the needs and wants of the kolkhoz members more fully, and bolster labor and production discipline.

Economic work must be fundamentally improved. Many kolkhozes are not making good use of the important technique of internal cost accounting [khozraschet] in the struggle to cut costs and raise quality indicators. Suffice it to say that only 56 percent of the kolkhozes in 1979 had all production subdivisions working on a cost accounting system. As the result of poor organization of internal cost accounting and unsatisfactory primary record-keeping many kolkhozes do not observe strict economy and thrift measures.

At most kolkhozes in the republic the introduction of progressive forms of labor organization is going poorly. These forms include teams working without schedule-orders ["naryady"], mechanized detachments, and brigades with payment based on the final results -- the quantity and quality of output produced.

Each year the All-Russian Council of Kolkhozes and the Republic Committee of Trade Unions of RSFSR Agricultural Workers appropriate more than 80 million rubles from the balance of capital in the centralized USSR fund for social insurance for kolkhoz members to pay for construction of cultural-domestic facilities at economically weak kolkhozes. In Kostromskaya, Kalininskaya, Kirovskaya, Ul'yanovskaya, and other oblasts this money is assigned by target designation and its use is strictly monitored. But this is not the case in all places. There are cases where these funds are spent for purposes outside their designation. In Ryazanskaya, Pskovskaya, Bryanskaya, and Lipetskaya oblasts the social insurance capital allocated for the construction of children's preschool institutions, clubs, and schools at economically weak kolkhozes is not being properly incorporated.

Organizing sponsorship by leading kolkhozes is important in work to improve the lagging kolkhozes. In 1979 the All-Russian Council of Kolkhozes approved the initiative of the Rossiya Kolkhoz in Kozel'skiy Rayon of Kaluzhskaya Oblast to sponsor two lagging farms. It is pleasing that this initiative has found broad support in many other oblasts, krays, and autonomous republics. For example, the Kolkhoz imeni Lenin in Novomoskovskiy Rayon of Tul'skaya Oblast sponsors the lagging Rassvet Kolkhoz. It helps the farm keep specialists, straighten out the planning and record-keeping for kolkhoz production, and harvest the crops. More than 10 leading kolkhozes in Tul'skaya Oblast have now become involved in sponsorships. The pioneer of sponsorship in the Mordovskaya ASSR was the Svobodnyy Trud Kolkhoz in Krasnoslobodskiy Rayon. It is helping the Kolkhoz imeni Kirov become one of the leaders. Sponsorship work is expanding in Ardatovskiy, Zubovo-Polyanskiy, Ichalkovskiy, Lyambirskiy, and other rayons of Mordovia.

Sponsorship of economically weak kolkhozes by leading ones takes many forms. But the main thing is to give concrete help in improving the organization of production. Joint meetings of the boards of leading and lagging kolkhozes are held to develop and coordinate common steps. For example, the Kolkhoz imeni Radishchev in Gagarinskiy Rayon of Smolenskaya Oblast is helping the neighboring Kolkhoz imeni Kirov with machinery, feed, and even personnel. One experienced specialist from the Kolkhoz imeni Radishchev was recommended to be chairman of the sponsored farm.

Further development of specialization and concentration of agricultural production based on interfarm cooperation and agroindustrial integration plays an important part in the struggle to strengthen the kolkhoz economy and raise production efficiency. We must make broader use of the advantages of interfarm cooperation in the interests of creating conditions for overcoming the backwardness of economically weak kolkhozes.

Our country is preparing for the 26th CPSU Congress. The kolkhoz peasantry of the republic, becoming involved in the pre-congress socialist competition, is striving in the final year of the 10th Five-Year Plan to give the country more agricultural output, to winter the livestock successfully, and to lay a solid foundation for a further rise in agricultural production and the efficiency and quality of work during the 11th Five-Year Plan.

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AGRO-ECONOMICS AND ORGANIZATION

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IMPROVING ORGANIZATION OF INTERFARM COOPERATION IN SIBERIA DISCUSSED

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 11, Nov 80 pp 20-21

[Article by A. Romanov, deputy director of the Siberian Scientific Research Institute of Economics of Agriculture, candidate of economic sciences: "Improve Production Management"]

[Text] In recent years new organizational forms of production based on the principles of collectivization of material, financial, and labor resources have been developing more and more broadly in Siberian agriculture. Multisectorial farms are being replaced by large specialized enterprises and associations that are able to make fuller and more effective use of scientific-technical advances. In Western Siberia alone there are today 15 production associations, 10 interfarm enterprises, and 290 kolkhozes and sovkhozes that perform such functions. There are 266 interfarm organizations serving agricultural production, including 102 construction organizations, 79 forest management organizations, and 68 energy organizations. A large majority of the sovkhozes and kolkhozes participate in joint production of one or several types of output.

The advantages of specialization are obvious. For example, the Omsk Bacon Hog Raising Association produces about 25,000 tons of hog meat a year. The Omichka Vegetable Association produces more than 90 percent of the vegetables produced in Omskaya Oblast. The Vorob'yevskiy Interfarm Cattle Feedlot in Kolyvanskiy Rayon of Novosibirskaya Oblast sells about 12,000 tons of beef a year with minimal costs. The Berdskiy Vegetable-Dairy Sovkhoz in the same oblast has increased its gross output by 40 percent in the last five years.

When evaluating the organizational forms of agricultural production in Siberia it must be considered that large farms have formed here, chiefly sovkhozes, which produce a fairly narrow range of products: in the steppe, forest-steppe, taiga, and subtaiga zones -- grain, meat, and milk; in the suburban areas -- vegetables, potatoes, milk, and grain. These characteristics determine the trend in development of interfarm cooperation, based mainly on specialized farms. Some participants in cooperation produce intermediate products (raise heifers, build up young animals) while others are responsible for the final product (fatten livestock, produce milk). This form of cooperation does not require large capital investment because it keeps the forms and methods of production organization typical of the kolkhoz or sovkhoz system.

In the suburban zones it is wise to set up specialized production associations such as the Omichka Vegetable Association of Omskaya Oblast, the Tomich Association of Tomskaya Oblast, the Leninskoye Meat-Dairy Association of Novosibirskaya Oblast, and agroindustrial combines.

With further development of specialization and concentration of production both internally and on an interfarm basis, intrasectorial and intersectorial production-technological and organizational links become more complex. These things require appropriate modifications on the system of management. But it has by no means been adequately revised in all places. The trend toward growth in the size of the administrative apparatus continues. At sovkhozes in Western Siberia, for example, the proportion of the administrative apparatus in the total number of sovkhoz employees has increased 1.5-2 times compared to 1965. Studies show, on the one hand, that this results from a number of objective preconditions related to the reduction in the total number of agricultural employees, the growing complexity of production, and the deepening division of labor, which also applies to management labor.

On the other hand, there are subjective reasons resulting from shortcomings in carrying out existing scientific recommendations and progressive practices. This refers to wider use of economic methods, switching farms to a sectorial (shop) management structure, improving information supply, and optimizing managerial functions.

Under conditions of interfarm cooperation the need for a fundamental improvement in economic methods of management, above all planning, becomes paramount. Based on their significance, plans for delivery of agricultural output from one farm to another should be viewed as plans for sale of output to the state and be ratified by decisions of the proper executive committees of Soviets of Peoples Deputies. A generalization of the working experience of interfarm enterprises in Siberia and of sovkhozes and kolkhozes that perform similar functions shows that the efficiency of their activities depends greatly on observance of conditions for mutual deliveries of intermediate output, feed, materials, and the like.

Improving production management depends largely on the introduction of progressive management structures. A large majority of Siberian farms use a territorial (division) structure. While this structure has worked well at multisectorial kolkhozes and sovkhozes, in many cases it is not appropriate to the current level of development of productive forces. It is being supplanted by the more progressive sectorial (shop) structure of management, which creates conditions for more rational use of land, labor, machinery, and other resources. It becomes possible to consolidate crop rotations, maneuver extensively with tractors and machinery, and organize flow production processes. The role of specialists is intensified, they have greater responsibility for the final results of economic activities, and democratic principles of production management are improved. There is a belief that the transition to sectorial structure is only possible at compact kolkhozes and sovkhozes where the population is concentrated in one or two towns. The experience of the Berdskiy Sovkhoz in Novosibirskaya Oblast shows that this system can also be used efficiently at farms with a large number of populated points. The farm has five towns at distances of 3-17 kilometers from the central buildings. Until 1974 each town had its own division that worked on a closed cycle. With the transition to sectorial structure the farm set up livestock, crop farming, and vegetable farming shops, mechanization and electrification, cultural and domestic service, construction, repair, and dispatching services, and departments for planning, bookkeeping and finances, secretarial work, and supply.

Each populated point has specialized tractor-field work and animal husbandry brigades, a mechanical maintenance point, and a branch of the housing and cultural-domestic services office whose employees are responsible for the condition of housing, public catering enterprises, nursery schools, and clubs. A construction brigade headed by a foreman has been established. The farm dispatching service is headed by the deputy director for operational management, who is also the chief dispatcher. The garage and the supply department with its storage facilities and central POL base are subordinate to this service.

In short, analysis shows that there are no objective factors preventing the introductions of the sectorial management structure at many agricultural enterprises in Siberia.

With the development of interfarm cooperation the characteristics of management organization depend primarily on the forms of ownership on whose basis the organizations are established. At interkolkhoz enterprises it is structured on the principles of election and accountability characteristic of the kolkhoz system; at intersovkhoz enterprises the principles typical of sovkhoz structure predominate. At the same time the democratic principle of management is strengthened. For example, councils of directors are formed.

The farms joining in cooperative production often have different departmental affiliation. In this case a rational combination of territorial and sectorial management is achieved on a democratic basis by setting up a single body (council) that decides interdepartmental questions.

It is wise for the council to include the managers of institutions and enterprises located in the region and involved with agriculture: the managers of the rayon divisions of Goskomsel'khoztekhnika and Gosbank and the directors of Mezhkolkhozstroy [Interkolkhoz Construction] and Raysel'khozenergo [Rayon Agricultural Energy].

Analysis shows that the principal shortcomings in the system of management at production associations in Western Siberia are poor integration of the head enterprise, lack of clearcut organizational-production links among the farms, and failure to reconcile the separate economic interests of the cooperating farms and the association as a whole. Additionally, the management apparatus is broken up into numerous separate elements, their interaction is poorly coordinated, and the combination of centralization and decentralization of managerial functions is not optimal.

It is exceptionally important for further development of the association that the head enterprise be given the functions of integration. At the Omichka Vegetable Raising Association, for example, the head enterprise is the hothouse combine. Production links with the Zarya and Novoomskiy sovkhozes, which are included in the organization, were formed mainly on the basis of the canning plant. Closed cycle work has been continued in such areas as capital construction and repair, vegetable seed growing, the agrochemical and land improvement service, vegetable transportation, and certain others. This made it impossible at first to use the labor and material resources of the farms efficiently and did not promote development of the association as a unified production mechanism. Therefore, the plan of economic and social development of this association worked out by scientists at the Siberian Scientific Research Institute of Economics of Agriculture proposed concrete steps to establish integrated links between the hothouse combine and the participating farms.

A similar situation took shape at the Leninskoye Dairy-Meat Association where cooperation was achieved chiefly by specialization of the sovkhozes in different stages of the production of livestock output and centralization of construction work and outside hauling. The job of forming a unified organizational mechanism is not yet complete there either.

The leading enterprises of numerous other associations in Siberia also do not yet have stable integrated features. Therefore, one of the main challenges is to centralize managerial functions. The criterion for the degree of centralization should be as follows: those types of activity which it is inefficient to do separately at each enterprise should be transferred to the association. As the production base at the associations becomes established it will be wise to centralize capital construction, material-technical supply, transportation, planning and bookkeeping, and marketing of output.

The increased level of division of labor leads to significant changes in the system for producing final output. The initial and final points of this system are now usually outside the bounds of the individual agricultural enterprise. Therefore, external factors have a significant impact on production results in addition to internal factors.

Intersectorial changes demand clearcut production-economic cooperation between agriculture and other sectors and the organization of a unified rayon agrarian-industrial complex with a system for planning and managing all enterprises and organizations engaged in the production, processing, storage, and marketing of agricultural output. Solving these problems will undoubtedly facilitate successful fulfillment of the tasks that will be outlined by the coming CPSU Congress.

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AGRO-ECONOMICS AND ORGANIZATION

FURTHER DEVELOPMENT OF MATERIAL-TECHNICAL BASE OF PROCUREMENT ORGANIZATIONS URGED

Moscow ZAKUPKI SEL'SKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 11, Nov 80 pp 1-4

[Lead article: "Development of the Material-Technical Base of Procurement Is a Guarantee of Preservation of Farm Products"]

[Text] The working people of the kolkhozes and sovkhozes, engaged in socialist competition to greet the 26th Congress of the CPSU in a worthy manner, have completed this year's grain harvest. Following the "first commandment," many farms sold more grain to the state than envisioned by plan. The further destiny of the harvest has been entrusted to the thousands of workers and specialists at the grain-receiving enterprises.

Along with all Soviet people, the employees of the elevator industry are preparing to greet the 26th CPSU Congress in a worthy fashion. During the period of grain procurement most of the enterprises organized around-the-clock work to receive grain from the kolkhozes and sovkhozes. Before this there was work to prepare the material-technical base of the grain-receiving enterprises. The work was well done in Krasnodarskiy Kray (P. N. Ryazantsev is head of the grain products administration), Altayskiy Kray (S. R. Strelyayev), Dnepropetrovskaya Oblast (V. K. Kupriyanov), Kustanayskaya Oblast (A. F. Uryupin), and elsewhere. This enabled enterprises in Krasnodarskiy Kray and Kustanayskaya Oblast to receive 170,000-180,000 tons of grain a day apiece.

The managers of individual enterprises are working hard to seal the seams in elevator siloes made of reinforced precast concrete. At the Bendery elevator in the Moldavian SSR, for example, this was done with Thiokol mastic. Sealing the seams of precast elevators is exceptionally important for grain preservation.

Thanks to the daily assistance given by the party and government in recent years, a significant number of grain storage facilities, grain driers, truck unloaders, and scales have been built for receiving and storing grain. The structure of storage facilities is being improved by introduction of new, modern highly mechanized and automated elevators. The capacity of elevators doubled between 1970 and 1979.

Despite the large-scale construction of elevators, difficulties arise with placement of grain during the procurement period in many regions because of great fluctuations in the production and procurement of grain. To eliminate the shortage of grain capacities, the USSR Ministry of Procurement plans in the 11th Five-Year Plan to build grain storage facilities chiefly in the grain production regions, which will make it possible to reduce the hauling distance from the kolkhozes and sovkhozes and to place the grain in bales ["bunty"].

In recent years the grain-receiving enterprises have received new AVS-50M truck unloaders and U15-URVS units for unloading grain from large-capacity trucks and truck trains. The available number is inadequate at present, and their production will continue. Truck unloaders at grain-receiving enterprises make it possible to unload up to 8.5 million tons of grain from trucks each day. But to do this it must arrive evenly through the 24 hours.

To preserve the grain it is important not only to have physical facilities, but also to use them correctly. Many regions of the country have introduced the progressive method of centralized control of harvesting, transportation, and procurement work where trucks arrive at the threshing floors of the kolkhozes and sovkhozes according to hourly schedules figured down to minutes. After the trucks are loaded with grain they deliver it by schedule to the grain-receiving enterprises so that it arrives evenly throughout the 24 hours. This eliminates truck downtime for both loading at the kolkhoz and sovkhoz threshing floor and unloading at the grain-receiving enterprises. This makes it possible to raise the productivity of truck transportation by 30-40 percent and the productivity of equipment lines at grain-receiving enterprises by 25-30 percent. This method is widely used in Krasnodarskiy and Stavropol'skiy krays and Orenburgskaya, Tselinogradskaya, and many other oblasts.

However, experience with grain procurement in 1980 demonstrated that grain was not delivered to the receiving enterprises steadily around the clock in some places. On 5 August in Khersonskaya Oblast, for example, 28,000 tons of grain was delivered to grain-receiving enterprises, but just 1,000 tons or four percent came between 2200 and 0800; on 9 August in Volgogradskaya Oblast seven percent of the 24-hour total of grain deliveries came during the night-time hours even though a large amount of market grain was available at kolkhoz and sovkhoz threshing floors and there were vehicles to haul it. Such unsatisfactory organization of work reduces the productivity of vehicle transportation and leads to prolonging harvest and procurement time, which means losses of agricultural output.

Under the wet weather conditions of the current year it is very important for grain-receiving enterprises to have grain driers and keep them working at full capacity around the clock. The capacity of grain driers at grain-receiving enterprises today is 176,000 tons an hour or more than 100 million tons a month. At the same time many enterprises, especially in the regions that produce sunflower, brewing barley, and rice grain, do not have enough driers. In addition, it must be kept in mind that during the 11th Five-Year Plan much more market grain will be threshed by combines during harvesting and the grain-receiving enterprises will receive grain which must be dried on the day of threshing to be preserved. Therefore, plans for the 11th Five-Year Plan envision construction of a large number of grain driers.

This year most of the grain-receiving enterprises organized efficient, 24-hour work by grain driers from the first days of grain delivery and were able to dry the bulk of the incoming grain as it arrived. Grain drying was well organized at grain-receiving enterprises in Kustanayskaya, Poltavskaya, Kirovogradskaya, and other oblasts. At the same time, some enterprises which had large volumes of too-moist grain did not use driers to full capacity. In the Bashkirskaya ASSR on 25 August, for example, 178,000 tons of damp and wet grain was in storage, but the capacities of their grain driers were only being 50 percent used. Similar things happened in Penzenskaya, Tambovskaya, and Ryazanskaya oblasts.

As in past years, additional money and materials were allocated this year for development of the grain-receiving enterprises. From this it is expected that the following additions to the basic plan for 1980 will be made: 240,000 tons of capacity at mechanized grain storage facilities; 200,000 square meters of asphalt surfaces; permanent grain driers with a total capacity of 3,000 tons an hour; 1,000 large-capacity trucks. The job of grain-receiving enterprise managers is to fully incorporate this money and put the planned structures and equipment into use. Less than two months is left to finish this work.

The shortage of grain storage facilities in a number of regions of the country demands introduction of the maximum number of elevators envisioned by the plan. But in the first three quarters of this year the plan for introduction of elevators was only 75 percent fulfilled.

The CPSU Central Committee and Comrade L. I. Brezhnev, General Secretary of the Central Committee and Chairman of the Presidium of the USSR Supreme Soviet, have frequently pointed to the need to insure full preservation of the agricultural output that is raised. At the ceremony in Alma-Ata on 29 August of this year Comrade L. I. Brezhnev emphasized again that losses of crops that are already raised are absolutely intolerable. Needless to say, these words are fully applicable to preservation of the most important crop -- grain.

A large majority of the collectives of grain-receiving enterprises take a proper attitude toward insuring preservation of the grain. But there are also some enterprise managers who permit poor practices. At the Temirtau Grain Products Combine in Karagandinskaya Oblast, for example, damp grain was placed in siloes at the elevator in violation of established procedures. It underwent self-warming and its quality was damaged. At various enterprises of the Aktyubinskaya, Kaluzhskaya, and Permskaya oblast administrations of grain products loose-stored grain was not picked up at the proper time. In Kzyl-Ordinskaya Oblast in 1979 several fields of grain rice were harvested early and had a large amount of green grain. This rice was delivered to grain-receiving and processing enterprises where it was allowed to undergo self-warming. Some of the grain turned yellow and could not be used to produce good-quality groats.

During the procurement season this year a large amount of market grain was left on farm threshing floors for extended times; as a result self-warming occurred, quality was damaged, and there were losses. This situation occurred in Volgogradskaya, Saratovskaya, Kuybyshevskaya, Penzenskaya, and Ural'skaya oblasts.

The managers of farms and rayons which held back on sale of grain to the state, violating the first commandment, caused great material loss to the state and the economy. After all, when grain with a malt aroma and sprouted grains is sold to the state, the state purchase price is reduced by 25 percent. In this case the defective grain is used for industrial purposes, because it usually is not even suited for use as feed.

Chief state inspectors for state purchases and quality of agricultural products, checking on compliance with state procurement discipline and preservation of the grain, are expected to stop such cases.

At the present time most of the grain received for state resources has been dried, cleaned, and placed under roofs. In conformity with the order of the USSR Ministry of Procurement an inspection has been made of preservation of grain products at all grain-receiving and processing enterprises; during this the problems identified were eliminated. But in places where not all the grain has been put in stable condition for storage, available grain driers and active ventilation equipment must be used to full capacity to put the grain in condition for winter storage and see that it is fully preserved.

Because of the rainy summer and fall this year, the situation with preservation of potatoes and vegetables has been especially difficult. To insure that the population will be supplied with these products during the fall and winter of 1980-1981 plans call for trade and procurement organizations to put 6.3 million tons of potatoes and 4.9 million tons of vegetables in long-term storage.

Trade and procurement organizations have significantly enlarged their material-technical base for potato, fruit, and vegetable storage in recent years to insure preservation of these important food products. In just the present five-year plan more than 2 million tons of storage capacities have been introduced. The state trade and consumer cooperative systems have storage facilities with a total capacity of about 12 million tons this year. All the same, there is a shortage of storage space for one-time food storage, especially facilities with active ventilation and cooling. For example, just 35 percent of the total potato storage capacities of the USSR Ministry of Trade system have active ventilation, while in the consumer cooperative system it is 66 percent. In many places, therefore, more potatoes, fruit, and vegetables must be put in storage facilities that are not adapted for this purpose.

Progressive potato and vegetable storage technology is being introduced too slowly at storehouses of the RSFSR Ministry of Trade. Just 23 percent of the vegetable storage capacities of local trade organizations have cooling, while 38 percent of the potato storage facilities have active ventilation and only five percent use container storage. In the system of the Russian Union of Consumer Societies 65 percent of the vegetable and potato storage capacities have active ventilation.

Nonetheless, the construction of storage facilities for potatoes, vegetables, and fruit is going very slowly in many Union and autonomous republics, krays, and oblasts. In Lipetskaya Oblast in 1979, for example, trade enterprises fulfilled just 78 percent of their assignment for introduction of capacities, while in Penzenskaya Oblast the figure was 61 percent, in Kaluzhskaya Oblast it was 44 percent, and in the Chuvashskaya ASSR it was only 44 percent. In the last four years plans for construction of storage space were not fulfilled in the Ukraine, Uzbekistan, Kazakhstan, Georgia, Azerbaijan, Moldavia, and Turkmenistan.

There have also been good experiences. In Latvia the plan of state capital investment envisioned construction of 4,400 tons of capacity in the state trade system of the republic in the first four years of the five-year plan; actual construction was 12,000 tons. The Belorussian SSR fulfilled the construction plan for 1976-1979 by 281 percent, Lithuania achieved a figure of 106 percent, and Kirgizia fulfilled it by 182 percent. Tajikistan and Armenia also fulfilled their plans.

By 1 September of this year capacities were basically ready to receive the 1980 harvest. Because of difficult weather conditions in most of the potato growing regions of the country the tubers are poor in quality; small potatoes predominate, mostly with underdeveloped skins. The excess moisture promoted large-scale development of potato and vegetable diseases. As a result, the fruit and vegetable centers received some output that was too moist and not stable for storage.

For this reason, additional steps beyond strict compliance with the Instructions for Storage of Potatoes and Vegetables are needed to preserve the 1980 harvest. First of all, state procurement inspectors should intensify their monitoring of compliance with rules of storage and of special conditions recommended for batches damaged by diseases and agricultural pests.

For this purpose the state procurement inspectorates must organize monthly checks on preservation of fruit and vegetables at all storage centers. The managers of the centers and economic organizations should be informed of the results of the inspections and steps necessary to insure preservation of the potatoes and vegetables. In case of violation of storage rules, notice should be given to local people's control, Soviet, and party bodies.

When checking on the preservation of potatoes and vegetables special attention should be directed to seeing that healthy and contaminated batches are stored separately. Potatoes and vegetables that have been damaged by disease can be put in long-term storage only after processing. Temperature and moisture conditions of storage must be differentiated depending on the quality of the products. For dry, healthy potatoes it is wise to allow a healing period for mechanical damage. It is recommended that the stored potatoes be cooled to 2-4 degrees, preventing condensation from forming on the surface of the tubers. When the temperature in the storage facility is optimal ventilation is used only when the temperature within the layer of vegetables rises.

Batches of potatoes damaged by disease must be cooled immediately to 1-2 degrees by artifical cooling or intensive ventilation during the night-time hours. No healing period is allowed for these batches. When extremely moist potatoes are put in storage facilities with active and forced-air ventilation, they should be dried by intensive ventilation with outside air during the day-time hours.

When vegetables are being put in storage the temperature should be dropped to the optimal level as quickly as possible and then kept there. Before they are put in storage potatoes, vegetables, and fruit must be sorted by quality and, if possible, by variety. It is recommended that storage of potatoes and vegetables in containers be used more widely.

Potatoes, vegetables, and fruit should be released from storage facilities to enter the trade system depending on the ability of the variety to keep and the condition of the stored products.

The condition of the material-technical base of procurement and processing organizations and enterprises is one of the crucial conditions for further increasing state purchases of animal husbandry output and improving its quality.

Thanks to the constant concern of the party and government, the material-technical base of the procurement enterprises that make state purchases of meat, milk, eggs, and wool continued to develop in the 10th Five-Year Plan. Suffice it to say that 34 new meat combines were built and 94 existing ones modernized in recent years. A number of organizational-technical measures were carried out at meat processing enterprises and the technology for processing meat and milk is being improved. The result of all this is that for the country as a whole the livestock, poultry, and rabbits being purchased by the state today are undergoing timely processing.

New production capacities have been launched for processing milk products and leather, fur, and other animal husbandry raw material. The enterprises that process this raw material are also being modernized and re-equipped. Development and consolidation of the material-technical base of animal husbandry at the kolkhozes and sovkhozes is continuing.

Technical progress in the system for procurement of animal husbandry products, consolidation of the material-technical base of procurement organizations, and equipping the enterprises with new, more sophisticated industrial equipment and mechanisms has had a beneficial effect on the quality of output purchased. Most of the enterprises in the country have established conditions for timely receiving and processing of livestock, milk, and other animal husbandry output. Losses during transportation and storage have been reduced.

The procurement ministries of the Union republics and the state procurement inspectorates of many ASSR's, krays, oblasts, and rayons are participating actively in solving the varied and numerous problems of improving the activity of procurement organizations. They are devoting considerable attention to the development of their technical base, striving to maintain schedules for sale of animal husbandry output to the state and to insure timely processing and full preservation of these products.

Based on the results of inspections of the work of meat combines, milk plants, combines, consumer cooperative organizations, and other procurement organizations, the state procurement inspectorates are making suggestions toward further improvement and development of their material-technical base.

All this promotes to some degree improvement in the quality of many types of animal husbandry output being received for state resources. Nationwide in 1979 60 percent of the cattle purchased by the state were in top nourishment condition compared to 49 percent in 1976. Corresponding figures for grade I milk were 72 and 52.3 percent, while the porportion of top-grade wool in state purchases was raised to 60 percent during this period.

The material-technical base of the kolkhozes and sovkhozes in the Estonian SSR has been greatly strengthened in recent years as the result of purposeful organizational work by the republic Ministry of Procurement and the rayon state procurement inspectorates together with agricultural and procurement organizations. Up-to-date dairy equipment to process and store milk has been installed at most livestock units and laboratories are in operation. Good physical facilities made it possible to work out and employ precise schedules at milk plants and receiving points for receiving milk from the farms. Most milk processing operations have been mechanized. As a result, the quality of the output purchased in the 10th Five-Year Plan there improved significantly. Whereas 71 percent of the milk purchased by the state from sovkhozes and kolkhozes in 1974 was grade I, in 1979 the percentage was 92 and for the first six months of 1980 it was 93.1. More than 96 percent of the milk sold to the state is now in the first group for purity and 95 percent is cooled.

The quality of milk purchased by the state is also improving in the Ukraine and Lithuania.

There are still many omissions and shortcomings, however, in development of the material-technical base at the enterprises. Year after year certain Union republics (Kazakhstan, Belorussia, Uzbekistan, and Latvia) run into problems with meat processing at some meat combines during the time when large volumes of livestock, poultry, and rabbits are being purchased (September-October). This occurs because of the lack of production capacities. Repair work has gone slowly at meat combines in Georgia this year; on 1 August the repair plan there was only 79 percent fulfilled. The meat freezing chambers, hide shop, and facilities for holding livestock until slaughter at the Ural'sk Meat Combine were not put in order until very recently.

The sanitary slaughterhouses at several meat processing enterprises in the Russian Federation have not been repaired. It is difficult to unload livestock at the Kudymkar (Permskaya Oblast), Cherepovets (Vologodskaya Oblast), Shadrinsk (Kurganskaya Oblast), Volokolamsk (Moscow Oblast), and several other meat combines because of the lack of good rail sidings.

A less than ideal situation is taking shape at certain milk enterprises. For example, five enterprises (Lomintsevskiy, Ekupovskiy, Urusovskiy, Plavsk, and Pakhomovskiy milk plants) of the Tula Milk Industry Production Association were not ready, for various reasons, when large-scale milk deliveries began. As a result the farms in a number of rayons of Tul'skaya Oblast were forced to haul the milk considerable distances, which delayed its delivery and led to a drop in the quality of the milk products. This was the reason that the sale of grade I milk to the state dropped two percent this year in Venevskiy Rayon of Tul'skaya Oblast. Problems of major overhaul and reconstruction of water supply and cleaning structures at many milk enterprises in Saratovskaya Oblast have not been solved.

The milk industry today is building up production capacities chiefly at enterprises in large cities and communities. At the same time the low-level milk-receiving network is being curtailed, which makes timely delivery of milk more difficult and ultimately leads to a decline in milk quality. In Volgogradskaya Oblast, for example, the average radius of milk delivery is 59 kilometers and the maximum is 139 kilometers. Corresponding figures in the Tatarskaya ASSR are 30 and 160 kilometers, while in Georgia they are 38 and 170 kilometers. All these facts illustrate that the USSR Ministry of Meat and Dairy Industry and its local agencies are moving slowly to strengthen the material-technical base of enterprises for continuously receiving livestock and milk from the farms and are not creating the necessary conditions for timely processing of the milk purchased. The procurement ministries and state procurement inspectorates of the particular Union republics, krays, oblasts, and rayons are not checking as carefully as they were on this work.

Lack of storage facilities is a tight spot at the primary wool processing factories of the USSR Ministry of Light Industry system. Only 53 percent of the necessary capacity is available on the average; in Belorussia and Turkmenistan it is 20 percent and in the Ukraine 40 percent. The lack of storage space forces some wool factories to store the material in bales covered by canvas, which does not insure its preservation.

The consumer cooperative organizations buy a large amount of animal husbandry raw material from the farms and private individuals each year. But the state of the material-technical base in this system cannot be considered satisfactory either. Several Union republics are experience a lack of storage space for wool, leather, and other raw material at procurement offices. The number of livestock slaughter points in this system has decreased, not increased, in recent years. The number of slaughter points in the Tsentrosoyuz [USSR Central Union of Consumer Societies] system is slightly over 2,000 and few are being built at the kolkhozes and sovkhozes. The farms today have only 13,000-15,000 slaughter points (for 48,000 farms). Things are especially bad with the equipping of these points at farms in Uzbekistan, Tajikistan, Turkmenistan, Kazakhstan, and the RSFSR.

For these and other reasons livestock are slaughtered and leather raw material stored in unprepared rooms in many cases; therefore the leather material from many farms is low in quality. The sale to the state of hides that are practically unusable for consumer goods has not decreased in the current five-year plan. The farms in Uzbekistan, Kazakhstan, Kirgizia, Armenia, and Turkmenistan produce the most non-standard leather material. Tsentrosoyuz and its local agencies have not taken proper steps to straighten this out, and the procurement ministries of certain Union republics and state procurement inspectorates have not demanded high enough standards.

It is the job and duty of employees of the Ministry of Procurement to do everything possible for the development of the material-technical base of the enterprises and organizations that receive and process farm products and to improve their quality on this basis. This will enable us to successfully solve the problems of food supply to the population.

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AGRO-ECONOMICS AND ORGANIZATION

IMPROVED PROCUREMENT PRICE SYSTEM URGED FOR BELORUSSIA

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 11, Nov 80 pp 43-46

[Article by P. Sugako: "Improve State Purchase Prices"]

[Text] Under conditions of full cost accounting (khozraschet) profit is the most important indicator of the efficiency of agricultural production.

The agricultural enterprises of Belorussia receive most of their profit from sale of animal husbandry output. In the five years 1975-1979 the kolkhozes and sovkhozes received 2,432,900,000 rubles of profit from sale of animal husbandry output, 2.1 times more than from crop farming.

Profit, of course, is the amount by which monetary earnings exceed the prime cost of the output sold. The earnings of kolkhozes and sovkhozes for animal husbandry output sold today are formed from state purchase (procurement) prices and supplements to these prices. A 50 percent price supplement is paid for sale of above-plan output and supplements of 35 and 50 percent are given for young cattle sold at live weights above 350 and 400 kilograms. What role do state purchase prices play in the formation of profit and what is the role of these supplements?

Let us consider the structure of the profit of kolkhozes and sovkhozes of the Belorussian Ministry of Agriculture for 1975-1979. The indicators achieved by sovkhozes of Belorussian Ptitseprom [Poultry Industry] were not considered in the analysis because these farms do not receive feed from state resources.

Of the 2 billion rubles of profit earned by kolkhozes and sovkhozes through animal husbandry, 609 million was supplements to state purchase prices for selling above-plan output and 909.8 million was in the form of supplements for selling heavy cattle. This totals 1,518,800,000 rubles, which means 75.9 percent of the profit from animal husbandry came from price supplements. It is relevant to note that price supplements for above-plan sale of crop farming output are just 20 percent of the profit of the sector.

The high proportion of supplements in the formation of profit for animal husbandry as a whole reflects the structure of profit from sale of beef cattle. Beef cattle raising is one of the most profitable sectors of agricultural production in the republic and leads in terms of volume of profit. The farms of Belorussia received 82.7 percent of their profit from animal husbandry in 1975-1979 from the sale of cattle.

Supplements to state purchase prices for beef, for both above-plan output and for heavy young animals, were 76.2 percent of the profit of the sector. At sovkhozes virtually all profit came from supplements.

For a number of reasons, above all mistakes in the organization of production, many farms are not able to feed cattle to heavy weights. It is necessary to fulfill plans not only for sale of meat and milk but also for herd size, and the feed base is chronically unable to provide animal husbandry with feed in both quantity and, even more, qualitative respects. So these farms must keep a large number of livestock and sell young cattle at live weights of less than 350 kilograms, even though they know very well how advantageous it would be to put on another 30-60 kilograms and receive the 35-50 percent supplements.

About 40 percent of the young cattle are low in weight, and they are usually delivered by economically weak farms. It is not possible today to overfulfill the plan for sale of meat by selling livestock weighing below 350 kilograms. Therefore, the economically weak farms lose the supplements for above-plan output and for heavy livestock. Because supplements make up the bulk of profit today, the possibilities of raising the lagging farms to the level of the leaders are sharply curtailed.

The significant supplements to state purchase prices for heavy young cattle are not tied to the quality of the beef. They were instituted to raise the weight of cattle being sold and thus increase meat production without enlarging the size of the herd. As for the quality of the meat, there is every reason to believe that in this case it is not rising.

The opinion of specialists can be backed up by the existing norms for production of output at meat processing enterprises in the republic. The norms envision differentiation of production by types of animals, nourishment, types of processing, and even seasons (quarters) of the year, but not by the weight of the mature animal. For example, there are uniform norms for production of meat by categories for the group of most highly nourished steers regardless of their weight.

The proportion of fatty tissue increases sharply in livestock fed to the highest level of nourishment. As we know, however, relatively lean meat with 12-18 percent fat and even distribution of the fat between and within the muscles is most in demand among customers. Cattle weighing less than 350 kilograms are entirely capable of having these qualities. Thus, the quality of the beef is not a basis for the supplements to state purchase prices for young cattle.

The institution of price supplements for heavy young cattle led to positive changes in this sector. Considerable experience was gained with intensive production. The efficiency of feeding livestock to heavy weights was demonstrated. In comparison with 1970, when the supplements were introduced, the average live weight of livestock sold to the state by kolkhozes and sovkhozes in the republic increased from 318 to 367 kilograms.

With development of the sector, however, several of the former reasons for continued use of the existing supplements for heavy livestock are eliminated. Foremost among them is the increased expenditure of feed per unit of weight gain when livestock are fed to high weight, for which compensation must be made.

This pattern does in fact exist, but the prime cost of growth with intensive feeding to 450 kilograms does not increase. Mature animals are fed cheaper feed. Through full-value and uninterrupted feeding, the live weight of cattle reaches 400 kilograms and more by 18 months, while high growth energy still operates. In combination with the high labor productivity of caring for mature stock, the result is that the prime cost of gain in live weight in the final stages of feeding out is no higher than at an earlier age.

In the last five years the kolkhozes and sovkhozes of the republic have used an average of 10.8 quintals of feed units per quintal of growth in cattle. This average indicator includes eight feed units per kilogram at leading farms using intensive feeding and 12-14 feed units at most farms. Leading farms use the same amount of feed to raise a steer to a live weight of 450 kilograms as the others spend raising the animal to 300 kilograms. To summarize, we can say that increased expenditure of feed in the final stages of feeding out cannot serve as an argument in favor of continuing supplements for heavy livestock in the form used today.

The influence of supplements to state purchase prices for heavy cattle also cannot be overestimated by arguing that this increases meat resources through more rational use of young animals. The increase in the working herd at kolkhozes and sovkhozes of the republic in recent years has been stable: 75-76 calves per 100 cows. If we take deaths and forced salughter of new animals into account, about one-third of the calves do not go into production. If these young animals were preserved and fed to current weight averages, beef production would be increased 1.4 times. It is obvious that increasing the survival rate of young animals is an important reserve for increasing meat production, equal in significance to increasing weight at sale.

After the switch to accepting livestock according to meat quantity and quality the argument in favor of using supplements because well-nourished, heavy animals give a relatively larger output of meat is eliminated. At the present time the meat combines pay for livestock delivered by calculated live weight, beginning from the slaughter meat production.

The operation of the supplements to state purchase prices brought about a paradoxical situation where the output of leading farms cost the state more than that from economically weak farms. Note once more that we are referring here to output of identical quality delivered from the same price zone. This situation conflicts with the principles of price formation. When lagging farms have a higher prime cost, the level of prices for their output should not be lower than for leading farms. After investing enormous capital in the leading farms, the state has a right to expect to receive cheaper output from them.

The application of supplements to state purchase prices for beef cattle is selective. The supplements are enjoyed chiefly by leading farms which feed out stock in highly mechanized livestock units, in some cases on an interfarm basis.

The intensive work done in the republic in recent years toward concentration and specialization of meat production is unquestionably a good thing. But it should not be accompanied by the development of new unequal economic potential for the economic development of particular enterprises, for material and moral stimulation of their collectives. The first condition in establishing roughly equal economic conditions of development for all kolkhozes and sovkhozes is scientifically sound prices for the output they sell.

The existing supplements to prices for the meat of beef cattle, including those for above-plan output, very often create unequal economic conditions and act as the source of unequal development, not only of individual farms but even of entire regions. As an example, let us compare certain indicators of the development of the Progress Kolkhoz in Grodnenskiy Rayon and the Kolkhoz imeni Uritskiy in Gomel'skiy Rayon against all kolkhozes and sovkhozes in the republic (see table below)

Indicators of Farm Development and Sale of Beef to the State

Indicator	Kolkhoz imeni Uritskiy	Progress Kolkhoz	Belorussian Kolkhozes	Belorussian Sovkhozes
Sale of Beef to the State in 1975-1979, total, tons	12,200	9,900	2,047,400	1,189,000
Included in Above, Above-Plan Sale	2,540	1,590	264,000	104,100
Above-Plan Sales as Percentage	20.8	16.0	12.9	8.8
Prime Cost of a Quintal of Weight Gain, rubles	130.1	135.4	174.2	178.8
Average Sale Price of One Quintal, rubles	298.2	284.5	215.1	224.1
Assets per 100 Hectares of Agricultural Land on 1 January 1980, rubles				
All Types	395,600	246,400	102,400	111,700
For Agricultural Use	310,500	169,700	88,400	98,000
Housing	34,700	37,500	5,500	9,800
Wage Payment per Work-Day in 1979, rubles	7.15	8.41	5.07	5.55

The Progress Kolkhoz and Kolkhoz imeni Uritskiy are known far beyond the republic. They are major beef factories, and the Kolkhoz imeni Uritskiy is the head enterprise of an interfarm association for beef production.

The indicators given in the table (sale of livestock meat to the state, assets available, and wage payments) are closely interrelated. The indicators of these kolkhozes are so far above the republic averages that it is hard to compare them.

The exceptionally high level of development of these farms results from a combination of many factors. One of them is skillful management, which has been able to organize work well and correctly catch on to trends in agricultural development. The location of these kolkhozes in the surburban zone of oblast centers also plays a significant part. Incidentally, virtually all of the best farms in the republic are near rayon and oblast centers and have good road connections with them.

But the economic base for development of the Progress and imeni Uritskiy kolkhozes was high selling prices for beef. Both kolkhozes draw the full benefit from the system of prices and price supplements in beef cattle raising. Beef from these farms costs the state a great deal, almost 300 rubles for a quintal of live weight, which is 1.6 times the state purchase price for the meat of stock delivered in top nourishment condition.

The following comparison is relevant here. In 1977-1979 state purchases of young cattle in top nourishment condition were 1,271,400 tons, including 915,300 tons at high weights. The difference between these figures, 356,100 tons, refers to young cattle in top nourishment condition that were taken without the supplement for heavy stock.

We observed earlier that this beef is as good in quality as the meat of the heavy animals. If this output were sold at the selling prices for heavy cattle, even with the 35 percent supplement, the earnings per quintal would increase by 66.5 rubles. For the three years the increase would total 236.8 million rubles. The additional income per year would be 78.9 million rubles. This would mean additional income of 78,900 rubles for each of the approximately 1,000 farms where beef production brings little or no profit. This is the impact of the existing system of supplements for heavy cattle on the economically weak farms.

The supplement system in beef production has led to a situation where even such leading farms as the Progress and imeni Uritskiy kolkhozes, which have modern livestock units, receive 90 percent of their profit from supplements.

We should note that deliveries of young cattle from other farms to the livestock units of these kolkhozes are paid for at calculated prices which are included in the prime cost of the output sold. Therefore the prime cost reaches 180 rubles per quintal and the level of profitability for sales over five years was 54.6 percent at the Progress Kolkhoz and 69.5 percent at the Kolkhoz imeni Uritskiy.

The July 1978 Plenum of the CPSU Central Committee decreed that in the field of planning state purchases of agricultural products the multiplicity of plans be eliminated and, beginning with the 11th Five-Year Plan, unified, stepped-up, but realistic plans of state purchases of farm products will be established for the five years, with a breakdown by years, for republics, krays, oblasts, rayons, and kolkhozes and sovkhozes.

It seems advisable to complement the institution of unified plans for state purchases of agricultural products with work to improve state purchase prices. Specifically, the fact that supplements to prices for cattle produce 76.2 percent of the profit from beef cattle raising in the republic should be recognized as absolutely intolerable. It is the state purchase prices themselves that should insure an adequate level of profitability from production.

There are several ways to improve state purchase prices for beef cattle. The best one is as follows. Supplements for heavy young cattle are kept at their current levels, but they apply only to the live weight above 350 or 400 kilograms. In this case, the 35 percent supplement for a steer weighing 380 kilograms applies to just 30 kilograms, and for a live weight of 430 kilograms the 50 percent supplement would apply to a live weight of 80 kilograms.

Under this version additional payments for heavy livestock would be reduced to about one-tenth of the present level for cattle weighing up to 400 kilograms and to one-fifth for animals with live weights over 400 kilograms.

Would the farms still have an interest in feeding livestock to heavy weights? Certainly, they would. As we have shown, the prime cost of growth in the final stages of feeding out heavy stock, that is the growth in live weight beyond 350 kilograms, does not increase. But the selling price will rise as the weight of the cattle being sold goes up. Therefore, profitability will also rise.

Here is another way to straighten out financial calculations for selling cattle to the state. The existing supplements are reduced to roughly one-half of the present level: 16 percent for live weights of 350-400 kilograms and 29 percent for weights over 400 kilograms. In this case, as is true at present, the supplements apply to the full live weight. The profitability of feeding out to high weight is 1.5 and more times the profitability of raising cattle to 350 kilograms. Then the money saved by reducing supplements for heavy stock should be included in the purchase prices.

It has not been possible until recently to work out principles for giving farms equally intensive plans for sale of meat to the state. Establishing optimal plan assignments becomes even more complex for farms participating in growing interfarm cooperation. Therefore, supplements for above-plan sales should either be included in state purchase prices or give incentive to surpass the level of sales achieved in the preceding three years.

To make this incentive stable it can be given after passing 80 percent of the average level of sales. For example, the money saved from reducing supplements for heavy young animals according to the first alternative mentioned above can be used to pay 1.5 times the base price for all beef sold beyond 80 percent of the level of sales in the preceding three years. The second alternative, under which current supplements for heavy young animals are cut in half, makes it possible to make these payments taking supplements for above-plan sales into account.

It must be considered, when changing the system of price supplements in beef production, that in terms of taste and nutritional qualities the meat of young animals is significantly better than the meat of mature animals raised to the same degree of nourishment. Therefore, it would appear wise to set higher state purchase prices for the meat of young animals than for that of mature stock. Such an increase is entirely feasible using the money "freed" by reducing the supplements.

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AGRO-ECONOMICS AND ORGANIZATION

PROCUREMENT PRICES FOR CATTLE OBTAINED FROM PRIVATE SECTOR IN BELORUSSIA

Minsk SEL'SKAYA GAZETA in Russian 11 Nov 80 p 2

[Article by N. Tumanov: "To the Detriment of a Neighbor"]

[Text] A truck with high built-up slotted sides was standing in the vicinity of the office of the Kolkhoz imeni XXII S"yezda KPSS in Berestovitskiy Rayon. It appeared to be fully ready for operations. As a rule, such trucks are employed for transporting large-horned cattle. The chairman of the kolkhoz, R. Khomko, appeared to understand my thoughts when he explained:

"I am sending it to Gomel'skaya Oblast" he thereafter turned to the driver and escort and ordered, "Do not return without cattle. You can inquire as to where they are still available for procurement."

What was it that forced the chairman of the kolkhoz to send a vehicle hundreds of kilometers beyond the borders of the rayon for the purpose of purchasing cattle? Allow me to digress slightly before answering this question. The Kolkhoz imeni XXII S"yezda KPSS specializes in the production of beef. But it cannot boast over any successes realized in this work -- the plans for producing and selling meat to the state are not being fulfilled. Here the average daily weight increases in the fatlings are low. Moreover, the number of fatlings is not sufficient. It is not surprising to note that one third of the cattle billets in the farm's high quality facilities are constantly empty.

"The supplier-farms are letting us down" such is the complaint being heard at the farm, "They are not carrying out their contractual obligations with regard to supplying young stock."

One can only agree with this argument. Truly, the supplier-farms are annually disrupting the plans and falling short in their deliveries to the kolkhoz by hundreds of animals. Nor is this the first time that this problem has been raised. On one occasion it was studied by the rayon executive committee and the rayon people's control committee. Fine decisions were handed down, but no action was taken on them.

Meanwhile, the kolkhoz's plan for producing and selling beef to the state is based upon its existing capabilities. Three sources exist for providing this specialized farm with fatlings. One of these has already been mentioned -- supplier-farms.

They have proven to be unreliable partners. Internally produced young stock are also used for maturing purposes. Compared to the initial year of the five-year plan, the number of such animals has increased: the calf yield per 100 cows has increased by 10 head. True, this indicator is by no means one of the best. One out of every six cows is not producing offspring. But even with 100 percent retention of the young stock, the kolkhoz is unable to cover the deficit in fatlings caused by inability on the part of the supplier farms to provide the requisite number of animals.

The third reserve is that of procuring cattle from the private sector. Each year the kolkhoz acquires up to 300 animals from its own population. But even this number is not sufficient for filling the available facilities. Thus the leaders of the kolkhoz must look elsewhere. The kolkhoz's envoys travel to near and distant districts. And each listens to the same parting words: do not return empty-handed. And they do not return empty-handed -- each year they procure more than 800 animals on the side.

Thus the trip to Gomel'skaya Oblast turned out to be a profitable one. The vehicle returned to the kolkhoz loaded with young stock and following its arrival other vehicles were sent off to the same destination.

"Can it be that the local kolkhozes there have no need for these surplus young animals?" I inquired of R. Khomko.

"Certainly, they need them" answered a leader of the farm.

The following picture emerges from an understanding of the mechanism for purchasing and selling long-horned cattle. The envoys of the kolkhoz, upon arriving at a particular site, study first of all the economics of the farm. They are directly dependent upon the procurement prices for the young stock. If the kolkhoz is a weak and generally unprofitable one, it will be unable to pay the same amount of money for young stock as an economically strong farm. Taking advantage of this fact, the richer farms inflate the prices and augment their public herd to the detriment of other farms.

What was the reaction of the leaders of those farms in Gomel'skaya Oblast where the Berestovitskiy Rayon Kolkhoz imeni XXII S"yezda KPSS purchased cattle from the private sector? Not having met with these leaders, it is difficult to answer this question. However, the reaction in this instance must be the same for all. Permit me to explain this by citing a specific example.

The fact that envoys from Grodnenskaya Oblast are sent into neighboring oblasts to obtain cattle does not mean that similar envoys from those oblasts do not travel to Grodnenskaya Oblast. There is an adequate number of procurement agents. For example, representatives of Brestskaya Oblast visited the Kolkhoz imeni Lenin in Zel'venskiy Rayon. True, similar to others, they completed long journeys to the offices of farms without establishing personal contacts with the leaders of those farms. They visit distant towns without making a show of themselves. Thus, acting in a sly and stealthy manner, the Brestskaya Oblast representatives purchased many privately owned cattle at certain populated points of the Kolkhoz imeni Lenin. As the saying goes, they procured them from under their noses.

In continuing this discussion, permit me to cite the following fact. The Iskra Kolkhoz in Mostovskiy Rayon and the Kolkhoz imeni A. Voronetskiy in Berestovitskiy Rayon are neighbors. Yet the administration of the latter took the former by surprise. Last autumn, one of its representatives procured 18 cattle from residents of the village of Ostrovo.

This tends to create discord in the procurement prices for large-horned cattle obtained from the private sector. Distinct from sovkhozes, where a single firm price prevails, such a requirement is not observed at the kolkhozes. The administration of any kolkhoz automatically establishes its own rate. This is within its competence and in keeping with the model regulations. Thus it turns out that the more economically strong a farm is, the easier it is for it to take advantage of its neighbor. This is precisely what happened at the Iskra Kolkhoz. Here it was established that a payment of 1.8 rubles had to be made for a kilogram of live weight. The administration of the Kolkhoz imeni A. Vironetskiy paid 0.4 rubles more. Understandably, it is more profitable for a kolkhoz member to sell a calf to an individual whose payment is more generous. Moreover, such a difference can be substantial -- from 80 to 100 rubles per animal. This was the method employed by the Brestskaya representatives in Grodnenskaya Oblast and by the Grodnenskaya Oblast representatives in Gomel'skaya Oblast.

Private livestock are the property of the owner, who obviously is entitled to dispose of them as he wishes. But there is one aspect to this problem that must not be overlooked. The cattle do not gain weight in a vacuum, but rather by feeding upon the grass of a local farm. This same farm sustains a twofold loss subsequently. First of all, it sustains a loss in terms of feed. According to zootechnical data, 550-600 feed units of fodder are required per head of large-horned cattle during the pasture period. These animals are thereafter sold, with the public herd at the particular farm being reduced in number according to the number sold.

As a rule, uniform rates for the procurement of cattle prevail within the borders of a rayon in an oblast. This does not hold true for an entire oblast. The amplitude of fluctuations in a procurement price ranges to 0.4 rubles and more. Thus stronger farms purchase cattle from their weaker neighbors. The results of such actions have already been stated above.

Is it possible to avoid such undesirable phenomena? Yes, there is a solution. It was proposed by the owners of private cattle themselves and also by the leaders of kolkhozes. Here is their opinion: establish a single procurement price for cattle for an oblast. This question has been raised on more than one occasion during meetings of the oblast kolkhoz council. However, time is passing and as yet no decision has been handed down.

The opinion has been expressed that single rates can also be approved for a republic on the whole. There would then no longer be a need for representatives traveling to near and distant rayons in order to procure cattle from the private sector.. Greater attention could be focused on further improving specialization. Even more important would be the fact that one kolkhoz could no longer take advantage of another.

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AGRO-ECONOMICS AND ORGANIZATION

REVIEW OF READER LETTERS ON QUESTIONS OF PRIVATE PLOTS, THEIR PRODUCTS

Moscow PRAVDA in Russian 16 May 80 p 4

[Article by Ye. Grigor'yev and V. Yakhnevich: "Support"]

> [Text] The material published in PRAVDA on 4 February* under the heading "The Private Plot: Diverse Opinions" aroused a lively response from readers. The editors are receiving letters in which people express their own opinions and suggest ways to improve things.
>
> This heightened interest in this topic is not accidental. Private farming plots are rightly considered a quite large part of our country's agriculture. At the July 1978 Plenum of the CPSU Central Committee Comrade L. I. Brezhnev said: "As we review steps to develop public animal husbandry I want to stress again that we must also look after the private plots of kolkhoz members, workers, and employees. They are an important source of food supplies."

In their letters from various places in the country PRAVDA readers tell us that, thanks to the concern of the party and government, private plots are developing and their production of meat, milk, vegetables, and other products is increasing. G. Ashurov, a cotton grower at the Tajik Kolkhoz imeni Zhdanov, writes: "Every household now has its own cow; sheep and chickens are kept in the central areas. The state has granted rural workers credit to buy livestock and build outbuildings. Many people today are producing not just milk but also cream and butter."

I. Firyaga, an inhabitant of the town of Pirovskoye in Krasnoyarskiy Kray, writes of the beneficial effect of measures to stimulate the development of private plots: "For example, take our Pirovskiy Rayon. In just one year the inhabitants of the rayon sold the state 4,465 quintals of meat, 2,420 quintals of milk, and large numbers of eggs from their private plots. We have learned from our own experience that the private plot does not interfere with public production; it is a reliable support for it."

Stressing the economic side of private plot farming, many authors also call attention to its social significance. A. Krundyshev (Leningrad), N. Zhobukhov (Tambov), V. Komkov (Nal'chik), P. Zhovanin (Sumy), and others write that work in a garden or orchard is good leisure activity for a person, especially if the primary job does not require much physical exertion. It also has a good effect on the younger generation. Children become accustomed to useful activity and develop a love of the earth.

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* [See JPRS 76939/1260, 5 Dec 80, pp 26-30]

As we can see, this is truly an important matter and deserves allout support. In some localities, however, this is not well understood and private plots are not being helped along. "Many managers of kolkhozes, sovkhozes, and other organizations pay no attention to the care of private livestock," writes D. Zaytseva of the Zavety Lenina Kolkhoz in Kotel'nicheskiy Rayon, Kirovskaya Oblast. This same thing is mentioned is letters from V. Sukharev of Sredneye Pogromnoye in Krasnooktyabr'skiy Rayon of Volgograd, Ya. Nikiforov, V. Yushin, and V. Meshok, a worker at the Druzhba Narodov Sovkhoz in Chernigovskaya Oblast. And here is what we heard from P. Kotorobay, N. Arsen', and others at the Sergey Lazo Kolkhoz in Nisporenskiy Rayon, Moldavian SSR: "Some 200 families at our farm have bought cows and promised to sell surplus products to the state. What is the attitude of the kolkhoz management toward this? Instead of assistance we were told -- if you want to keep cows, graze them wherever you want, but we have no pastures." The matter was not straightened out until PRAVDA intervened.

Feed supply and the lack of haymeadows and pastureland are one of the main subjects in most letters. The problem is mentioned by Honored Agronomist of the RSFSR R. Tselikov of Leningrad Oblast and readers I. Smus' (Moscow), V. Shebeko (Lipetsk), S. Pryadko (Zhdanov), V. Koroleva and N. Sokolov (Kaliningrad), and A. Demchenko (Kiev). "We live on the edge of the city. We keep livestock and poultry and raise vegetables on our private plots," writes V. Grosu of Chernovtsy. "But we have trouble buying feed. At the present time 20 kilograms of mill waste per household per quarter is allocated. It is hard to buy vitamin and protein supplements. It would be a good idea to set up a special store in the city for people who keep livestock and to open a consulting point there for questions of individual animal husbandry."

There are still many problems with buying young animals. P. Shishlov of Novosibirsk writes: "As the result of the elimination of small hog units at many farms it has become both difficult and expensive to buy piglets on the market. The kolkhozes and sovkhozes seldom have them for sale."

Our reader mail contains many thoughts on the best way to proceed in the development of private plots in order to achieve the maximum economic benefit for both the owner and the state. In this respect many people favor the point of view expressed by G. Shmelev in his article "Reliable Support" regarding strengthening the link between the private and public sectors. Lawyer A. Belousov of Krasnodarskiy Kray proposes planning the production of output by private farms and allocating appropriate resources for the assignment. Elaborating on this, G. Orekhovskiy, graduate student at the Ukrainian Agricultural Academy, writes that it is time for public production to assume sponsorship of private farming, that is, to include it in its program. At present, however, no one holds the managers of kolkhozes and sovkhozes responsible for the condition of private plots.

Indeed, the private sector needs closer contacts with public production. Private plots account for 1.4 percent of our agricultural land. But more than 13 million cows, for just one example, are kept on this land. Such an area cannot possibly provide feed for the private herd. Why not bolster the supply of forage and young animals to private farms on contract principles, charging against future deliveries of meat and milk? This has already been done and has been reported to PRAVDA by readers in the Carpathian region and Odesskaya and some other oblasts. They feel that expanding cooperation will help increase the delivery of additional output and also raise the sophistication of private farming. Many letter-writers point out that work on private plots is still done by primitive methods. Private cows in various regions of Transcaucasia and Central Asia have very low productivity.

A. Labyak's article "Who Holds the Small Plot?" drew a stream of letters from readers. As the article noted, further development of private plots is a matter of great state importance. But we cannot allow excesses and violations of the law in this matter. Greed and speculation flourish in places where this is not taken into account. Letters from readers such as Yu. Ivanov (Kuybyshev), S. Kovalenko (Kiev Oblast), N. Tkachenko (Stavropol'skiy Kray), M. Bekovskiy (Krasnodarskiy Kray), I. Kopylov (Chernigov), K. Rigal' (Gomel'), and hundreds of others say that effective steps are essential to stop speculation and root out any sources of non-labor income. In the opinion of readers, to combat these evils we must, on the one hand, observe existing standards and principles on operating private plots, chiefly using economic levers to prevent offenses, and on the other hand, straighten out the procedures for receiving, transporting, and selling surplus output and help people sell it. V. Anashkin (Volgogradskaya Oblast), R. Baktayev (Makhachkala), Ya. Tsaruk (Leningrad), V. Neminushchiy (Belgorodskaya Oblast), N. Sibiryakov (Rostov-na-Donu), Yu. Shilov (Kiev), and others write of this. The thoughts of many letter-writers come down to suggesting that a higher payment for gas and light used in hothouses be set for those garden farmers who have sharply increased their proportion of market output and that ways be sought to improve the price mechanism for this output.

The issues of selling output are very pressing and a significant share of the letters discuss them. Many letters observe that it is still sometimes hard to get a truck to haul milk or a fattened boar or steer But the concerns expressed in the letters are answered where routes are set up to visit the private plots. This is demonstrated by the experience of the Latvian community of Nitsgale where cooperative members send special equipped vehicles, in effect mobile receiving stations, around to rural inhabitants every day.

The job of purchasing surplus agricultural output from the population is, of course, assigned to the consumer cooperative system. Judging by the letters, however, it is not making full use of this opportunity. Its retail network, which sells products at local market prices, is developing slowly and is ineffective in some places.

S. Chernogor, who lives in Kirovogradskaya Oblast, shares his ideas on the role of the kolkhoz markets in supplying food to the population. He writes that in Aleksandrovskiy Rayon the local Soviet agencies show little concern for vitalizing market trade and give farmers no incentive to bring in their products.

Moreover, the market directors often prohibit the sale of vegetables and fruit brought in from other oblasts. The problems with bazaars are discussed in letters from A. Sarkisov (Baku), P. Sokolovskiy (Kishinev), I. Pigalov (Gor'kiy), M. Ivanova (Khar'kov), G. Charkin (Chernigovskaya Oblast), and V. and I. Vasil'yev (Moscow). The readers are upset because not all markets have hotels. It is sometimes hard to get scales and information and advertising is poorly organized. The letter-writers come to the conclusion that the administrators of the markets should work more actively to draw in products, which would help lower prices.

Finally, the readers raise the problem of small mechanized equipment. D. Nikitin writes about the problems pensioners in Kostromskaya Oblast run into trying to procure feed. He writes: "Old men are no longer able to cut grass with a scythe. They asked me to buy some kind of machine to do the job for them. Industry does produce motorized mowers. But they are sold only to kolkhozes and sovkhozes, and none are allocated for private use. Why is this? In terms of technical specifications, they are well-suited for the private plot." PRAVDA was asked the same question by worker M. Malov of the Kasli Machine Building Plant in Chelyabinskaya Oblast, S. Svinarenko, an inhabitant of the town of Uryupino in Aleyskiy Rayon of Altayskiy Kray, A. Sultankulov of Frunze, and others. Many readers think that industry should produce home incubators, crushers, special motor scooters with carriages for hauling products and feed, sets of different tool heads for plowing a garden, clearing snow, and so on. Moreover, they want this equipment to be available from rental services as well as sold.

In short, there are numerous problems in the development of private farming. They must be solved; this is important work that needs allout support. At the same time we must not forget those letters whose authors point out that the private plot must above all be subsidiary. We cannot be carried away and overestimate its importance. We must not forget that the main thing is higly productive public production. This is the sector that we expect to meet the growing needs of the working people.

Party, Soviet, and management bodies are expected to carefully study trends in the development of public and private farming and take all necessary steps to see that agricultural production in the country rises and its prime cost goes down.

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AGRO-ECONOMICS AND ORGANIZATION

INCREASED SUPPORT FOR PRIVATE LIVESTOCK RAISING PAYS OFF IN ODESSKAYA OBLAST

Moscow IZVESTIYA in Russian 19 Jun 80 p 2

[Article by F. Chernetskiy, Odesskaya Oblast: "The Capacities of the 'Home Poultry Unit'"]

[Text] On the floodplain of a small stream near the town of Beloles'ye, which is on the Odessa-Reni highway, you find what seems to be a poultry kingdom. The ox-bows and lakes are snow white with geese. Flocks of poultry march along the roadside, dash across the asphalt as if it were a runway, heavily rise into the air, and then plop down quickly into the nearest pond. The abundance of geese in these parts is amazing. Recently I learned the secret of this abundance.

The Kolkhoz imeni Kutuzov is located in Beloles'ye. The farm specializes in raising geese. The kolkhoz animal unit has been put on an industrial basis and the poultry have permanent quarters. But the geese that have taken over the floodplain come from what are known as 'home poultry units,' which have appeared in recent years thanks to the new production relations that have developed between the kolkhoz and the inhabitants of Beloles'ye. These mutual obligations are based on contract obligations. The kolkhoz proposes that inhabitants of the town participate in raising poultry. These are the conditions. The goslings are provided free of charge. Anyone taking 50 or more head receives two kilograms of concentrated feed per kilogram of meat turned in. A plot where bulk alfalfa can be cut is allocated for the "home poultry unit." A forage specialist who brings feed and a veterinary specialist serve the population. Seventy percent of the poultry raised are turned over to the kolkhoz. The farm pays 50 kopecks per kilogram of meat. Thirty percent of the meat raised remains with the unit.

It became clear in the first year that it was not expedient to take small lots of poultry from the farm. Profit rises sharply if the flock is 200 or more. D. Belyy, teacher at the local school, has proved this in his own experience. He took 600 goslings at the kolkhoz. Of this 565 survived. He sold 420 of them to the kolkhoz. The owner of the "home poultry unit" received 700 rubles. In addition he was left with 145 fattened geese. His profit is obvious. But how about the kolkhoz? Last year alone this kind of cooperation gave the kolkhoz up to 40 extra tons of goose meat. This year the figure is expected to be higher, 100 tons. This means that roughly one-quarter of the poultry meat will be produced at home poultry units.

There is a kind of standard contract in effect in the oblast today. It stipulates times for delivery of day-old chicks, goslings, ducklings, and the like. They are delivered in kolkhoz or sovkhoz transportation. The young birds are turned over free of charge. For each kilogram of meat to be turned over two and one-half kilograms of mixed feeds are given, also free of charge. Half of this feed is released when the day-old chicks are received and the rest is provided in the middle of the fattening period. Seventy percent of the hens, for example, must weigh at least 1.5 kilograms apiece. The farm pays one ruble per kilogram of live weight. For duck meat it pays 80 kopecks. The amount paid is credited to the kolkhoz member in wages and considered in figuring the in-kind and additional pay on general principles. In this case the poultry and their transportation are the business of the kolkhoz or sovkhoz. The poultry raised at home units are counted in fulfillment of the farm's meat production plan.

But how are the 30 percent of the flock that remain with the owner of the home poultry unit fed?

"With rational use of the feed allocated there is enough for the entire flock," says V. Dorofeyev, chief animal technician of the oblast administration of agriculture. After all, when the persons involved in the private farming have incentive, everything is business-like.

Hogs are also fattened on contract principles in Beloles'ye. Last year they received 10 tons of pork from private units. I. Obushnyy, chairman of the Kolkhoz imeni Kutuzov, believes that the home unit has significant reserves for pork production. Incidentally, the chairman came to this conclusion on the basis of personal experience. His family also raises hogs and geese.

The experience of the Kolkhoz imeni Kutuzov provided the basis for development of a model contract for fattening hogs in the oblast. What are the main points of the contract? The kolkhoz provides a piglet or several piglets weighing at least 15 kilograms free of charge. The fattened hog which is returned to the farm must weigh at least 110 kilograms. The feed is also given free of charge, at 3.5 quintals of concentrate per quintal of weight gain. The owner of the home unit receives 20 percent of the weight gain achieved. Payment in kind, in meat, may substitute for money. The calculation is made at state purchase prices. In either case the person who fattens the hog receives an additional 50 kopecks for each kilogram of weight gain.

These conditions satisfy both contracting parties, so the business spreads quickly. In Saratskiy Rayon, for example, 2,000 piglets are already being fattened at home livestock units, while in Tatarbunarskiy Rayon the figure is 500 and in Baltskiy Rayon it is 500.

This kind of cooperation has aroused considerable interest among pensioners at the Kolkhoz imeni Kirov in Savranskiy Rayon. More than 80 head of cattle are now being kept at home units in the town of Kamennoye. Pensioner I. Gnatyshnyak, for example, is already fattening his third steer. He received more than 80 rubles for the last one he turned over to the kolkhoz.

Both parties take on such obligations. The person who takes the calf must fatten it to at least 412 kilograms within 18 months. For its part, the kolkhoz is obligated to supply concentrates at half a kilogram per kilogram of weight gain. The concentrate is delivered at the state price. As for coarse feed, it is issued according to need. When the steer is turned in the farm pays two rubles per kilogram of live weight. Delivery weight, of course, is excluded.

Other farms in Savranskiy Rayon such as the Kolkhoz imeni Lenin have systems of pay for home livestock units that are worked out in more detail. If the animal is turned in weighing less than 350 kilograms, the price is 1.24 rubles per kilogram of live weight, while for 350-400 kilograms it is 1.7 rubles, for 400-450 kilograms the price is two rubles, and for more than 450 kilograms it is 2.1 rubles. The point is that it is more profitable for the farm to buy animals in better condition.

The inhabitants of Savranskiy Rayon are now fattening 860 head of cattle under these conditions. But Baltskiy Rayon has already passed up the pioneers; they are fattening 1,350 steers at home units. The people in Lyubashevskiy Rayon have taken more than 1,000 steers for fattening.

It must be noted that this practice in fattening livestock began to be spread actively after the executive committee of the oblast Soviet of Peoples Deputies discussed and passed a resolution aimed at increasing the production of meat at the private units of kolkhoz members, workers, and employees.

"The new type of cooperation is becoming popular in our oblast," says A. Taranenko, secretary of the Odesskaya Oblast party committee. "More than 20,000 head of cattle, more than 30,000 hogs, and 500,000 poultry are now being kept at home units on contract principles. In short, according to preliminary calculations, we will be able to get an additional 10,000 tons of meat from this source this year."

This provides a good form of support.

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TILLING AND CROPPING TECHNOLOGY

UNITS, TECHNIQUES FOR SMOOTH PLOWING DESCRIBED

Frunze SEL'SKOYE KHOZYAYSTVO KIRGIZII in Russian No 10, Oct 80 pp 30-32

[Article by Yu. Vetrov, V. Grebtsov, and V. Valimov, candidates of technical sciences: "Units for Smooth Plowing"]

[Text] Moldboard tillage without heaped-up ridges and deep furrows, which are outthrown ["razval'nyy"] and opened by the last plow bottom, is called smooth plowing. It creates good conditions for highly productive use of aggregated units in the cultivation and harvesting of all agricultural crops. Smooth plowing is most effective where the unit works at 9-12 kilometers an hour on irrigated lands, especially in fields where there is erosion danger. The presence of high heaped-up ridges and outthrown furrows 16-35 centimeters deep reduces the productivity of implements by 15-20 percent. Where the ridges are poorly cut and the furrows are not covered at the right time the yield of many crops drops 30-50 percent.

Smooth plowing can be accomplished by the use of shuttle, two-way (reversible), and pickup plows and by units that include conventional plows with right-handed bottoms and following planers that level the heaped-up ridges; it can also be done by rational patterns of movement by the plowing units, for example the "envelope" and "no-loop" techniques. However, none of these techniques or existing plow designs is entirely appropriate to the demands made of them.

A survey of the work of plowing units at farms in Kirghiziya showed that shuttle and two-way plows are not used at all; they are not even ordered, because they are metal-intensive, have poor technical and operating reliability, and do not meet the requirements for use in large groups. The fields are generally plowed by the strip ["zagonnyy"] method, alternating plowing strips of inthrow ["sval'nyy"] and outthrow plowing. This minimizes the existence of inthrow ridges and outthrow furrows, which can be removed by special units. Of course, the plowing of inthrow strips is begun by an inthrow while laying the first furrow. Most machine operators, although they know that the best inthrown field is produced with four passes of the plowing unit, do it in just two, because this is the most productive technique. But the quality of the plowing is poor in this case; a high (10-15 centimeters) inthrown ridge remains with concealed unplowed spots beneath it that may be as much as 50-80 centimeters wide and 7-15 centimeters deep.

The outthrown furrows in the primary work areas and turning areas as well as the furrow opened by the last plow body when plowing around the field are not covered until preplanting tillage of the soil. This is done with a leveler, grader, or planer. Various designs are used. At the same time as the furrows are covered these implements level the inthrown ridges. But this procedure increases the prime cost of crop output because it requires the use of special units to level the inthrown ridges and cover the outthrown furrows. Moreover, in this case the Ipatovskiy method, which makes it possible to raise the labor productivity and work quality of the plowing units, is not used for the primary tillage process.

Taking these problems and progressive practices into account, the Kirghiz Scientific Research Institute of Crop Farming developed an effective technology for smooth plowing based on the use of new techniques, proposed and tested by the authors, for heaping up the ridges and covering the furrows. Equipment to do these jobs was also developed and allows the work to be organized by the Ipatovskiy method.

The inthrow plowing is done, forming a two-part outthrown furrow and covering half of it on the first pass (see Figure 1a below) of the plowing unit. The second half is covered on the second pass (Figure 1b). In this way the inthrow procedure is done in two passes of the plowing unit, which includes an implement (see Figure 2 below) that is a left-handed bottom (produced in series) fastened to the plow frame by hinges next to the first right-handed bottom, keeping their landsides parallel and not more than 10 centimeters apart. The left-handed bottom is changed from working to nonworking position from the tractor cab by means of a hydraulic cylinder. It is advisable to mount this device on broad-reach plows such as the PLN-5-35, PLP-6-35, and PN-8-35 aggregated with T-150K or K-700 tractors.

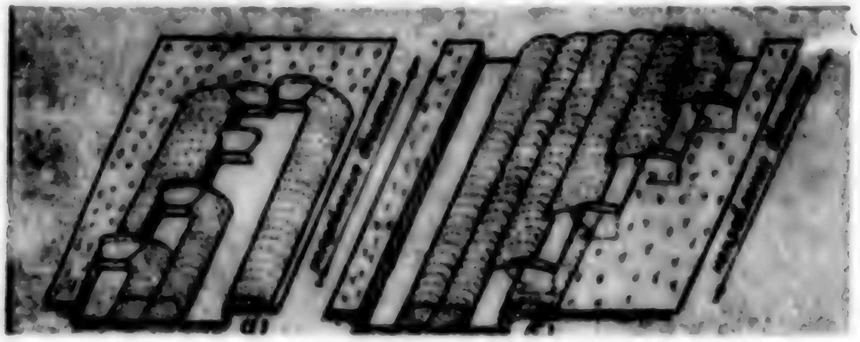

Figure 1. Schematic Diagram of Inthrow Plowing in Two Passes of the Plowing Unit (arrows show direction of movement of unit)

For four-bottom plows an attachment has been developed (see Figure 3 below) that includes a left-handed bottom mounted across the frame instead of the second bottom. The plow with this kind of bottom is specially assembled for inthrow plowing and rounding the field; at other times it is used in the ordinary way. The outthrown furrow is covered during the last pass of the plowing unit: plowing the final strip of a field in an outthrow plot, the last pass of the unit inthrow plowing the turning areas, rounding the field, and so on.

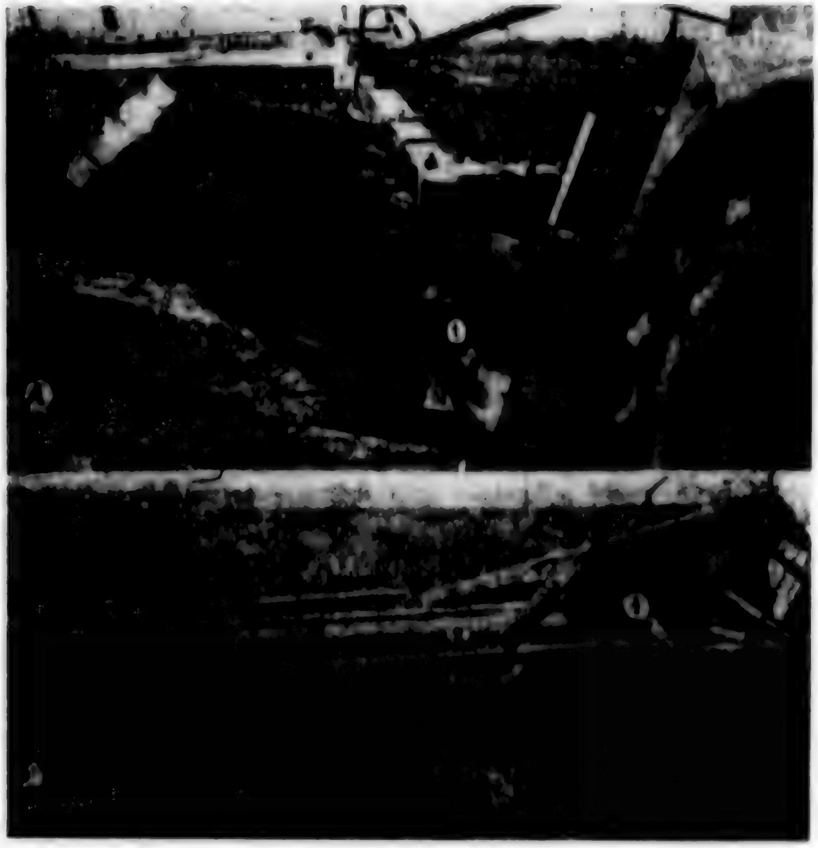

Figure 2. General Appearand of the Plow with Attachments:

Top picture -- View from front, devices 1 and 2 in working position;
Lower picture -- View from the right, devices in transport position.

(1) Left-Handed Bottom;
(2) Leveler.

The schematic diagram in Figure 4 (below) shows that the leveler covers the furrow simultaneously with the work of the plow. The leveler is a mounted implement with a curved share-moldboard surface that can be regulated for depth. At a working depth of 4-7 centimeters and a working width of 1.2-1.5 meters it cuts a slice from the tilled surface that is sufficient to completely cover the furrow opened by the last plow body. In order for the leveler to work normally in soils

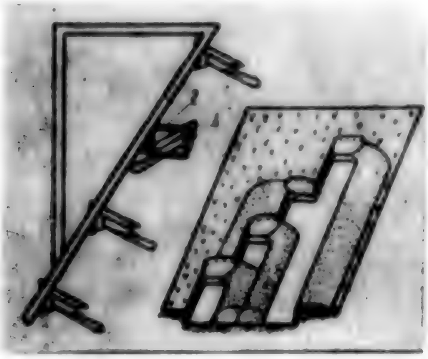

Figure 3. Design Diagram of Four-Bottom Plow with Left-Handed Bottom 1 Fastened to the Frame of the Plow Across Frame 2.

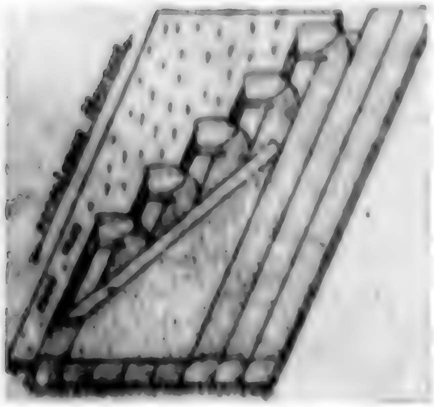

Figure 4. Schematic Diagram of the Work of a Plow with a Leveler (arrow shows direction of movement of unit, unplowed area on left is "edge of field")

with different physical and mechanical properties it is mounted at an angle to the line of movement of the plowing unit and to the soil surface. The leveler is raised to transport position and lowered to working position by the tractor cab by means of a hydraulic cylinder that is connected to the tractor's hydraulic system.

Our observations showed that the plowing team for a strip 800 meters long with an average field size of 30 hectares should include 3-4 similar units, for example K-700 and PN-8-35 or T-150K and PLN-6-35. If this is done just one of the units needs to have a plow rigged up with a left-handed bottom and leveler (as shown in Figure 2). When fields are being tilled by the strip technique the unit that has the attachments with the left-handed bottom does the inthrow plowing on each inthrow strip while the first furrows are being laid. After finishing this it begins ordinary plowing on the third inthrow strip and two other units plow the first and second inthrow strips. When the inthrow strips have been plowed the unit with the attachments levels the outthrown furrows, plows the turning areas, and rounds the fields while the other two units move on to the next strips or plots. When the turning areas are being plowed by the inthrow method the left-handed bottom is used in the first pass of the plowing unit and the leveler in the last.

When this procedure for tillage is used and the plowing units are organized by detachment (team) it is possible to produce smooth plowing that fully meets requirements; not a single heaped-up ridge, furrow, or unplowed spot concealed beneath them will remain. If the detachment is made up of different types of units, for example K-700 and PN-8-35, T-150K and PLN-5-35, and DT-75M and PN-4-35, the PN-4-35 plow should be rigged up with the attachments. The left-handed bottom is mounted as shown in Figure 3 and the leveler as shown in Figure 2. The tilling procedure is similar, except that the inthrow plowing and furrow covering is done by the DT-75M and PN-4-35 unit.

The third alternative for smooth plowing suggests rigging up all the units of the team with plows on which left-handed bottoms and levelers are mounted. Then each unit does the inthrow plowing and levels the outthrown furrows in its own strips. After plowing their strips all the units of the team begin inthrow plowing of the turning areas together, moving one behind the other.

In the first pass the first unit has its left-handed bottom engaged and in the last pass the last unit engages its leveler. This alternative allows smooth plowing when the team is made up of plowing units of any type.

Tests of a T-150K and PN-5-35 plowing unit with attachments mounted on the plow, used for plowing for grain crops on ordinary northern serozem soil of average texture with 8-12 percent moisture content, plowing to a depth of 25-30 centimeters with the unit moving at 7-10 kilometers an hour, demonstrated its high technological reliability. The quality of the inthrow plowing corresponded fully to agronomic requirements: regardless of the speed of the unit the ridge height was 4-7 centimeters, the depth was as assigned, and there were no unplowed spots under the inthrow ridge. When the leveler was set at a depth of 4-10 centimeters and the working width was 1.5 meters the outthrow furrow was fully covered.

Increasing productivity in inthrow plowing and leveling the furrows and doing this work well gives a savings of 1.1-1.3 rubles per hectare, which would be 1.3-1.5 million rubles for all the arable land of Kirghiziya. This is without considering the impact of raising the productivity of the unit that perform technological operations in preplanting soil tillage and harvesting the crops. The high economic efficiency of these units and their reliability permit us to recommend the smooth plowing technique that has been developed for broad introduction not just at farms in Kirghiziya, but also beyond the republic.

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POTATO GROWING, STORAGE IN SOVIET FAR EAST

Moscow SOVETSKAYA ROSSIYA in Russian 9 Oct 80 pp 1-2

[Article* by V. Anikeyev, A. Klimenko, and V. Razboynikov, Far East: "Potatoes for the Far East"]

[Text] The Soviet Far East today produces about 600,000 tons of potatoes. We must emphasize that this is only at the sovkhozes and kolkhozes. In the structure of planted area of this region potatoes occupy 4.4 percent. Potato production has stabilized. Farmers have made advances in yield in the last two five-year plans. At the start of the 1970's they were getting 86 quintals of potatoes per hectare; the figure today is over 100. Of course, this may seem a modest figure. But we cannot forget that we are talking about the Far East, a region of permafrost and tropical downpours, of chronic drought in the first half of the summer and excess moisture in the second half. The difficulties of local potato growers are not hard to visualize.

They must be solved because great hopes are held for the workers of the country's easternmost farmland. The decree of the CPSU Central Committee and USSR Council of Ministers on continued multifaceted development of the productive forces of the region posed the challenge of fully meeting the food requirements of the population of the Far East through local production. With regard to potatoes, present production is 15 percent below the required amount. Can this deficit be made up? Of course it can.

Studies by economists at scientific and experimental institutions in the zone and progressive experience testify that potato production is very efficient under local conditions and the greatest successes are enjoyed by those farms which take a comprehensive approach to solving the problems. At the science-practice conference held in May under the title "The Food Base of Siberia and the Far East," the experience of the Zarechnyy Sovkhoz on Kamchatka was called a "northern miracle." This high praise was based on the results of the farm's work in recent years. Yields of over 200 quintals are no longer a goal there; they are the norm. On some fields they even raise 300 quintals per hectare.

These accomplishments are especially valuable because they were not done on tiny testing plots, but rather under conditions of extensive field production. The farm has one-third of all potato fields on the peninsula and provides a graphic example of specialization and concentration of production.

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* [Similar article appeared in JPRS 76991/1261, 12 Dec 80, pp 10-14.]

The farmers of Sakhalin may pride themselves on similar successes. Ferries do not have to carry trains with potatoes to the island. The Sakhalin farmers have made farmland of 111,000 hectares of river valleys, hillsides, taiga, and marshes and 12,000 hectares have been put in potatoes. This is enough to give the local population the standard amount, an average of 120 kilograms per person per year.

But the Far East also includes Primor'ye, the Amur region, Kolyma, Chukotka, Khabarovskiy Kray, and Amurskaya Oblast. Things are hard everywhere. The difference is that some conquer the problems while others refuse to attack them. Certainly this is the significance of the fact that while some 5.5 million hectares of land in the region are cultivated today, an additional 4-5 million hectares could be brought into agricultural use. The usual excuse is, "That isn't useful land. It's absolutely worthless." But here is the opinion of Academician of VASKhNIL G. T. Kaz'min:

"Of course, with a limited choice of area preference will be given to flood-plain lands, but with our current production-technical base and existing crop technology practically any soil can be put into potato rotations. They can be turned into soils that are sufficiently fertile and suitable for raising agricultural crops in a comparatively short time."

Everyone 's familiar with the extreme soil and climatic conditions in which the farmers of Kolyma must work, but all the same Vasiliy Petrovich Savinskiy's team receives 214 quintals of potatoes per hectare near Magadan and Georgiy Leonidovich Sukhenko's team at the Tauyskiy Sovkhoz gets 192 quintals. Then there is Hero of Socialist Labor A. A. Moiseyenko of the Partizanskiy Sovkhoz in Primorskiy Kray, who got 523 quintals of potatoes per hectare!

But here are examples on a different level. The average yield last year in Spasskiy and Yakovlevskiy rayons of Primor'ye was no more than 63 quintals a hectare. Primor'ye is not the only place such yields can be found. The only way to eliminate the shortfall is through rational organization of potato growing, switching it to an industrial basis, and introducing scientifically sound measures that insure stable management of the sector. There is no escape for small farms; this is an axiom. It is impossible to raise the economic efficiency of potato growing under Far Eastern conditions without specialization and concentration of production. As experience shows, in Khabarovskiy and Primorskiy krays sovkhozes which plant 400 and more hectares of potatoes are profitable, with a level of profitability that reaches 20-25 percent at the leading farms. By contrast, dispersal of market potato growing makes it unprofitable.

The system of farming practices should also be fully appropriate to the unique soil conditions of the region. The system is worked out in principle by scientists and essentially says to raise the potato plant onto a ridgebed or crest to prevent excess moisturization and, later, to accumulate moisture in the dry period. The ridge-crest technique of potato raising is a kind of small-scale land improvement carried out on every square meter, for every plant. As long-term studies and production testing at the Khabarovskiy and Druzhba sovkhozes in Khabarovsk have shown, yield rises 30-40 percent and labor productivity increases 30 percent when the crop is raised on ridgebeds 140 centimeters wide. But the farms in Okhotskiy, Verkhne-Bureinskiy (the Baikal-Amur Mainline zone), and Vyazemskiy rayons of Khabarovskiy Kray are using this technique on less than one-third of their plantings.

Why is this? Do they lack a feeling for new advances? Do they lack the desire to follow progressive practices? Has work to propagandize and introduce the technique been poor? These are hardly the whole story. Let us put ourselves in the position of the manager. As they say, you cannot plow the field without a good horse. But the horse here is worthless. There has not been specialized machinery to cut the ridges and there still is none. Even at the experimental-demonstration farm of the Far Eastern Scientific Research Institute of Agriculture they have been forced to work on their own; they solder, rivet, and weld, trying to modify the old horse instead of getting a new one. However, there is one. But there is only one, an experimental planter built by machine builders in Ryazan' and appropriate to the new technique. The plant is far from wanting to put the machine into production. A combine is needed, and again, there is none.

Far Eastern potato varieties degenerate very quickly. It takes a minimum of 10-15 years to develop new ones under natural conditions. But this work can be stepped up considerably at a plant breeding center. Construction of such a center has already begun in Khabarovsk, but it is going forward very slowly through the fault of Khabarovskkraystroy [Khabarovskskiy Kray Construction].

There is another problem too: Far Eastern varieties are more subject to disease than western varieties. Here is the opinion of V. G. Reyfman, leading expert and head of the virology department at the Soil Biology Institute of the Far Eastern Science Center of the Academy of Sciences USSR: "Plant breeding and seed raising work cannot be done on a high level without special techniques to sanitize the plants. To do this we must organize the production of antiviral serums. The virology department of the institute has developed a technology for producing several serums, but the sharply increased demand for them, the shortage of essential research associates, and the lack of hothouse facilities make it impossible to produce these valuable preparations in ever-growing quantities. We must organize mass production of them at one of the scientific research institutions of VASKhNIL."

There are many questions, each of them worth thousands of tons of output. But the attitude toward requests from the local areas is, to be frank, a cool one. Primorskiy Kray asked the RSFSR Ministry of Agriculture for permission to set up a primary seed raising station; nothing doing, this item was crossed off the list. But Primorskiy Kray needs such a station more than anyone else. For 20 years the southern Far East, located in the most unfavorable zone for potatoes, the subtropical zone, has produced the lowest yields.

Improving seed raising in general is one of the paramount challenges of potato growing in the zone. Under current conditions it can be done by establishing science-production associations for seed resources. In Khabarovskiy Kray, for example, such an association could comprise the department of potato growing and the experimental-demonstration farm of the Far Eastern Scientific Research Institute of Agriculture, the Birodidzhan agricultural testing station, and the Komsomol'sk testing field in cooperation with kolkhozes and sovkhozes of the corresponding zones.

Of course, simply raising the potatoes is not the whole job; they must be delivered to the consumer in the best possible condition. In the Far East this problem is more serious for at least two reasons. This is a country of great distances; 100 kilometers here is nothing. It is a land of traditional fall monsoons, and the fields cannot be sheltered by umbrellas. It follows from this, taking the experience of past years into account, that proper harvest tactics and strategy must be developed in advance so as not to be caught unprepared.

Potato spoilage begins in the field. The potato digging process should not take more than 15 days, but here it takes a month at best. The tubers are always rained on, but they are not always gathered up and dried. There are not enough workers.

Where is the long-awaited combine? Where is the set of machinery that will handle the entire potato raising cycle? According to the latest calculations such a set of machinery would consist of 15-17 units. But the farms of Kamchatka, Sakhalin, Primorskiy and Khabarovskiy krays, and Magadanskaya and Amurskaya oblasts do not have one-third of the essential machinery. And what they do have is obsolete in design or close to the junkpile. The farms' requests for essential machines and trailer equipment go unfulfilled by Goskomsel'khoztekhnika year after year. We see no initiative by the Ministry of Tractor and Agricultural Machine Building; they are in no hurry at all to eliminate problems with the technical equipment of the potato growers. Of course it is easy to request that equipment be developed. We know the objections already: "Who? When? By what plans?" We agree. Machinery is not developed and built overnight; it takes years. But there is also another way, redesigning and improving already existing machines, the KTN-2, KTN-2M, and KTN-2B potato diggers whose use in various conditions has demonstrated that they do not meet even the most elementary requirements of the present day. We would like to see the design bureaus and scientific research institutes of the USSR Ministry of Agriculture pay attention to this alarm signal. The academy institutes concerned with automation and process control, such as the one in Vladivostok, could also become involved.

There are 100,000 fishermen working at sea. The fishing cooperatives send potatoes to the ships in standard new 35-kilogram nets. They are delivered, but there is nowhere to store them. There are no special compartments for them. In 2-3 months at least one-third of the potatoes are unusable.

"Off-duty personnel report to process potatoes," is a frequent command on ship radios.

If the weather permits canvases are spread on the deck for this operation. But usually it has to be done in the passageways. To reduce losses the potatoes must be brought to the ships in enclosed "northern" containers. But there are none. After all, Vladivostok is in the south and the statute on regions equivalent to the Far North does not apply to it. The fact that Vladivostok fishermen fish as far north as anyone is not considered. The Primorskiy Kray Fishing Consumers Cooperative has been asking the RSFSR Consumers Cooperative Society and USSR Gosplan about northern containers for more than 10 years, but the problem has not been solved. The fishermen are left eating puree and borshch made from dried potatoes.

Here is another observation. Potatoes are usually sent to the north in late October and early November. At this time the weather there is bitterly cold, down to -30 degrees C. The potatoes are not kept warm on board ship and they sometimes arrive frozen. Of the 12,500 tons of frozen potatoes last year, more than 2,000 tons were delivered to fruit-vegetable centers of the food office of the Severovostokzoloto [Northeastern Gold] administration of workers supply. Both the suppliers and the Far Eastern Maritime Steamship Line must consider the needs of the Far North.

But it is just as upsetting when the potatoes that were raised and delivered to winter storage with such care are lost through mismanagement and indifference. The above-mentioned workers supply administration wrote off more than 9,000 tons in 1978-1979.

It is even worse when some important project is preceded by prolonged thought, discussion, coordination, demonstrations of its necessity, a search for means, and considerable expenditures and then the result is a mistake. Primorskiy Kray decided to build storate facilities at the points of production, not in the kray center. So large storehouses were built in Lazovskiy and Chuguyevskiy rayons. But they overlooked "one small thing" -- in the winter it is impossible to haul heavy freight over the mountain passes of the Sihote-Alin range. So the potatoes stayed on their side of the mountains. The result was that thousands of potatoes were thrown in a heap and not a single tuber was kept. Comrade A. G. Khizev, the director, was removed from his job, but this did not makes the loss any easier.

Potatoes wants to be handled delicately, but there is no special equipment to load them into railroad cars, just as their are no special cars or containers that would make the potatoes' travels easier. But these travels are long and hard. Khabarovskiy Kray buys most of its potatoes from Kemerovo, Novosibirsk, and Krasnoyarsk. And we must admit that a good deal has been done in the kray to deliver the potatoes to the buyer in good condition.

In the last five years the capacities of storage facilities have been increased by 10,000 tons; they can now hold more than 30,000 tons of potatoes. Construction of new capacities is planned. Potato planting is to be expanded in the 11th Five-Year Plan. The yield of the crop is to be raised. Thus, they are preparing backup facilities here in advance.

The city's attitude toward potato storage is instructive. Party and Soviet bodies have assigned a definite rayon to each facility. Plants and large enterprises are acutely interested in seeing that as few people as possible are employed in such an unrewarding job as sorting potatoes. Therefore they are trying to mechanize the work. The fact that one of the plants is moving slowly with finishing up an unloading machine that would be able to empty cars several times faster than usual is viewed as a serious problem. Such cases are reviewed by party activists.

Here is one more characteristic detail. The vegetable storage facilities have railroad sidings. Thus the potatoes, which suffer enough in transportation, are spared one more disturbance. But transportation also has its problems: the shortage of motor trolleys, conveyors, and efficient loading machines.
In any case, stores in Khabarovsk sell potatoes almost all summer long, making a significant dent in the ranks of the bazaar habitues.

This kind of storage should be built everywhere. Then every citizen of the Far East could have warm, tasty potatoes on the table. Without potatoes a table is not really a table and a holiday is not really a holiday. And this article was not written for the sake of general statement about the natural wealth that people have been given; it was written for the practical purpose of improving the work.

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